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ANNUAL REPORTS

OF THE

PRESIDENT AND TREASURER

OF

HARVARD COLLEGE.

1880-81.

BIBLIOTHECA
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PRESIDENT'S REPORT FOR 1880-81.

To the Board of Overseers: —

The President of the University has the honor to submit the following report for the academic year 1880–81, namely, from Sept. 30, 1880, to Sept. 29, 1881: —

The University must long lament the loss of Benjamin Peirce, Perkins Professor of Astronomy and Mathematics, who died on the 6th of October, 1880, in the seventy-second year of his age and the fiftieth year of his service as a college teacher. His mind was both brilliant and profound, his influence inspiring and far-reaching; and his eminence in science and philosophy exalted the University and reflected honor upon the country.

RESIGNATIONS.

Charles Pickard Ware, Instructor in English, October 11, 1880.
Alfred W. Field, Proctor, October 11, 1880.
Charles W. Barnes, Proctor, October 11, 1880.
Robert S. Avann, Proctor, October 11, 1880.
Eugene Wambaugh, Proctor, October 11, 1880.
Frederic H. Hedge, Professor of German, February 14, 1881.
Sylvester Primer, Proctor, March 30, 1881.
Andrew Preston Peabody, Preacher to the University and Plummer Professor of Christian Morals, March 30, 1881.
Barrett Wendell, Instructor in English, June 1, 1881.
Frank Waldo, Assistant in the Observatory, September 26, 1881.
John Henry Wheeler, Tutor in Greek and Latin, September 26, 1881.
Robert W. Greenleaf, Assistant in Botany, September 26, 1881.

In accepting the resignation of Frederic H. Hedge, D.D., Professor of German since 1872, the Corporation could not but remember with satisfaction that for nine years, at least, the University had had the benefit of Dr. Hedge's services as a teacher, and of his established reputation and influence as a student of language, history, and philosophy, and as a master of style.

At the end of the year, Dr. Andrew P. Peabody, in fulfilment of a purpose formed long before, retired from the position of Preacher to the University and Plummer Professor. For twenty-one years Dr. Peabody had been both preacher and teacher, and had discharged the duties of his delicate and responsible office with unvarying fidelity, kindliness, and dignity. By his moderation and independence he had done much to fix the character of the office, and to make it impossible that it should hereafter be held by any but a man of the broadest catholicity. He retired in the full enjoyment of health and strength, and with the affectionate respect of all the officers and students of the University, past and present, who have known him. The Corporation, in accepting his resignation, directed that his name be continued upon the University catalogue as Preacher and Plummer Professor Emeritus.

APPOINTMENTS.

[UNLIMITED, OR FOR TERMS LONGER THAN ONE YEAR.]

William James, to be Assistant Professor of Physiology for five years from December 1, 1880, April 25, 1881.

Bennett Hubbard Nash, to be Professor of Italian and Spanish, April 25, 1881.

Francis Greenwood Peabody, to be Parkman Professor of Theology, May 9, 1881.

George Alonzo Bartlett, to be Assistant Professor of German for five years from September 1, 1881, May 9, 1881.

Adrien Jacquinot, to be Assistant Professor of French for five years from September 1, 1881, May 9, 1881.

Walter Faxon, to be Assistant Professor of Zoölogy for five years from September 1, 1881, May 9, 1881.

Charles Loring Jackson, to be Professor of Chemistry, May 9, 1881.

William Elwood Byerly, to be Professor of Mathematics, May 9, 1881.

Louis Dyer, to be Assistant Professor of Greek and Latin for five years from September 1, 1881, May 30, 1881.

Henry Willard Williams, to be Professor of Ophthalmology, June 27, 1881.

James Clarke White, to be Professor of Dermatology, June 27, 1881.

Ernest Young, to be Instructor in History, October 11, 1880.

Edward Emerson Phillips, to be Tutor in Latin and Greek for three years from September 1, 1880, October 11, 1880.

John Henry Wheeler, to be Tutor in Latin and Greek for three years from September 1, 1880, October 11, 1880.

Charles Sedgwick Minot, to be Instructor in Oral Pathology and Surgery, October 11, 1880.

Manuel Jacob Drennan, to be Instructor in English, May 9, 1881.

Frederick Lutz, to be Tutor in German for three years from September 1, 1881, May 30, 1881.

James Greenleaf Croswell, to be Tutor in Greek and Latin for three years from September 1, 1881, May 30, 1881.

Edward Laurens Mark, to be Instructor in Zoölogy, June 8, 1881.

Francis Winthrop Dean, to be Tutor in Engineering for three years from September 1, 1881, June 27, 1881.

Howard Malcolm Ticknor, to be Instructor in Elocution, July 12, 1881.

George Riddle, to be Instructor in Elocution, July 12, 1881.

Henry Preble; to be Tutor in Latin and Greek for three years from September 1, 1881, September 26, 1881.

Frank William Taussig, to be Proctor, October 11, 1880.

Gerrit Smith Sykes, to be Proctor, October 11, 1880.

William Schofield, to be Proctor, November 8, 1880.

Sylvester Primer, to be Proctor, January 10, 1881.

Henry Champion Jones, to be Proctor, April 11, 1881.

Frank William Taussig, to be Secretary for the President, October 11, 1880.

[FOR ONE YEAR OR LESS.]

For 1880–81.

Francis Greenwood Peabody, to be Lecturer on Ethics and Homiletics, October 11, 1880.

Charles Edward Faxon, to be Instructor in Botany, October 11, 1880.

Benjamin Marston Watson, to be Instructor in Horticulture, October 11, 1880.

Edward Burgess, to be Instructor in Entomology, October 11, 1880.

Lester Sackett Ford, to be Demonstrator in Zoölogy, October 11, 1880.

Barrett Wendell, to be Instructor in English, October 11, 1880.

Freeman Snow, to be Instructor in Forensics, October 11, 1880.

Manuel Jacob Drennan, to be Instructor in English, October 25, 1880.

Grenville Stanley Hall, to be University Lecturer on Pedagogy and on Contemporary German Philosophy, November 8, 1880.

Carroll D. Wright, to be University Lecturer on the Factory System, February 28, 1881.

Edward Cornelius Briggs, to be Clinical Instructor in the Dental School, October 11, 1880.

John Thomas Codman, to be Clinical Instructor in the Dental School, October 11, 1880.

Timothy Otis Loveland, to be Clinical Instructor in the Dental School, October 11, 1880.

Charles Wilson, to be Clinical Instructor in the Dental School, October 11, 1880.

Albert Benton Jewell, to be Clinical Instructor in the Dental School, October 11, 1880.

Edwin Perley Bradbury, to be Clinical Instructor in the Dental School, October 11, 1880.

Manning Kennard Rand, to be Demonstrator of Operative Dentistry, October 11, 1880.

George Franklin Grant, to be Demonstrator of Operative Dentistry, October 11, 1880.

James Read Chadwick, to be Clinical Instructor in Gynaecology, January 10, 1881.

Thomas Buckminster Curtis, to be Clinical Instructor in Diseases of the Urinary Organs, January 31, 1881.

Edward Hickling Bradford, to be Clinical Instructor in Orthopedic Surgery, January 31, 1881.

Oliver Fairfield Wadsworth, to be Clinical Instructor in Opthalmoscopy, January 31, 1881.

William Carroll Emerson, to be Assistant in Chemistry, January 10, 1881.

Walter Joseph Otis, to be Prosector in Surgical Anatomy, January 31, 1881.

For 1881–82.

Edwin Herbert Hall, to be Instructor in Physics, April 25, 1881.

Freeman Snow, to be Instructor in Forensics and History, June 8, 1881.

James Lawrence Laughlin, to be Instructor in Political Economy, June 8, 1881.

George Bendelari, to be Instructor in Modern Languages, June 8, 1881.

Henry Howland, to be Instructor in Torts, June 8, 1881.

Joseph Henry Allen, to be Lecturer on Ecclesiastical History, June 8, 1881.

Francis Barton Gummere, to be Instructor in English, June 27, 1881.

BENJAMIN OSGOOD PEIRCE, JR., to be Instructor in Mathematics, July 12, 1881.
FRANKLIN HAVEN SARGENT, to be Instructor in Elocution, July 12, 1881.

LEONARD PARKER KINNICUTT, to be Assistant in Chemistry, June 8, 1881.
WILLIAM HARLOW MELVILLE, to be Assistant in Mineralogy, June 8, 1881.
CHARLES FREDERIC MABERY, to be Assistant in Chemistry, June 8, 1881.
ROBERT WILLARD GREENLEAF, to be Assistant in Botany, June 8, 1881.
CHARLES HENRY MORSS, to be Assistant in Biology, June 8, 1881.
JOHN ELIOT WOLFF, to be Assistant in Geology, June 8, 1881.
CHARLES ROBERT SANGER, to be Assistant in Organic Chemistry, June 8, 1881.
HAROLD WHITING, to be Assistant in Physics, June 8, 1881.
JOHN ROBINSON, to be Assistant in the Arboretum, June 8, 1881.
HENRY CHAMPION JONES, to be Assistant in Botany, September 26, 1881.

JOSEPH PEARSON OLIVER, to be Clinical Instructor in Diseases of Children, June 8, 1881.
THOMAS MORGAN ROTCH, to be Clinical Instructor in Diseases of Children, June 8, 1881.
AMOS LAWRENCE MASON, to be Clinical Instructor in Auscultation, June 8, 1881.
FREDERIC CHEEVER SHATTUCK, to be Clinical Instructor in Auscultation, June 8, 1881.
JAMES READ CHADWICK, to be Clinical Instructor in Diseases of Women, June 8, 1881.
THOMAS BUCKMINSTER CURTIS, to be Clinical Instructor in Diseases of the Urinary Organs, June 8, 1881.
EDWARD HICKLING BRADFORD, to be Clinical Instructor in Orthopedic Surgery, June 8, 1881.
OLIVER FAIRFIELD WADSWORTH, to be Clinical Instructor in Ophthalmoscopy, June 8, 1881.
CHARLES FOLLEN FOLSOM, to be Lecturer on Mental Diseases, June 8, 1881.
FRANK WINTHROP DRAPER, to be Lecturer on Forensic Medicine, June 8, 1881.
CHARLES SEDGWICK MINOT, to be Lecturer on Embryology, June 8, 1881.
WILLIAM PALMER BOLLES, to be Instructor in Materia Medica, June 8, 1881.
SAMUEL GILBERT WEBBER, to be Clinical Instructor in Diseases of the Nervous System, June 8, 1881.
CLARENCE JOHN BLAKE, to be Clinical Instructor in Otology, June 8, 1881.
JOHN ORNE GREEN, to be Clinical Instructor in Otology, June 8, 1881.
JAMES JACKSON PUTNAM, to be Clinical Instructor in Diseases of the Nervous System, June 8, 1881.
EDWARD NEWTON WHITTIER, to be Instructor in the Theory and Practice of Physic, June 27, 1881.

John Homans, to be Clinical Instructor in the Diagnosis and Treatment of Ovarian Tumors, June 27, 1881.

Francis Augustus Harris, to be Demonstrator of Medico-Legal Examinations.

Charles Sedgwick Minot, to be Instructor in Oral Pathology and Surgery, June 27, 1881.

George Franklin Grant, to be Demonstrator in Mechanical Dentistry, June 27, 1881.

Virgil Clarence Pond, to be Demonstrator in Operative Dentistry, June 27, 1881.

Elbridge Gerry Cutler, to be Assistant in Pathological Anatomy, June 8, 1881.

William Sturgis Bigelow, to be Assistant in Surgery, June 8, 1881.

George Minot Garland, to be Assistant in Physiology, June 8, 1881.

Maurice Howe Richardson, to be Assistant in Anatomy, June 8, 1881.

William Carroll Emerson, to be Assistant in Chemistry, June 8, 1881.

Walter Joseph Otis, to be Prosector in Surgical Anatomy, June 8, 1881.

Henry Parker Quincy, to be Assistant in Histology, June 8, 1881.

Thomas Waterman, to be Assistant in Anatomy, June 8, 1881.

Francis Henry Davenport, to be Assistant in Gynaecology, June 27, 1881.

Charles Jason Staples, to be Librarian in the Divinity School, June 27, 1881.

Benjamin Reynolds Bulkley, to be Proctor in the Divinity School, June 27, 1881.

William Gray, Henry J. Bigelow, and Thomas G. Appleton, to be Trustees of the Museum of Fine Arts for one year from January 1, 1881, January 10, 1881.

There has recently been some discussion in the University concerning the relative advantages of the three recognized modes of filling professorships: namely, by promoting gentlemen who have served here successfully in lower grades; by inviting hither professors in other institutions; and by calling to professorships gentlemen who have never been teachers, but who have otherwise distinguished themselves in theology, law, medicine, literature, or science. Each of these methods has merits of its own. The first supplies well-proved professors, and makes the lower grades of university service reasonably attractive to young men who propose to make teaching their life-work; the second brings to one institution valuable experience and information acquired in other institutions and communities, and if it were commonly resorted to in this country, as it is in Germany, would be here, as there, a strong incentive to capable and ambitious young professors; the third brings fresh blood into the profession of teaching. In a long-established institution having a numerous staff it is easiest to use the first method, safest to use the first and second, but wisest to use all three. The third method is chiefly applicable to appointments in theology, law, and medicine, and in those departments of literature and science in which men give good evidence of great attainments through their writings. In the learned professions merit is brought to public tests which are likely to demonstrate, among other things, fitness or unfitness for teaching; but in other departments of learning it may be very hard to discover whether large attainments are, or are not, accompanied in a given individual by any faculty for teaching. Hence the indisputable advantages of the third method of appointment are only to be reaped at some risk.

The following lists, which contain the names of all the present professors and assistant professors of the University, give in each case the date of appointment and the previous service, if any.

Professors who did not serve this University in any lower grade.

O. W. Holmes	1847
A. Gray * †	1842
H. A. Hagen * ‡	1870
H. J. Bigelow	1849
H. L. Eustis	1849
J. R. Lowell	1855
J. D. Whitney *	1865
W. Gibbs * †	1863
D. D. Slade	1871
G. M. Lane	1851
C. C. Everett	1869
C. F. Dunbar	1871
C. C. Langdell	1870
J. B. Thayer	1873
F. H. Storer †	1870
C. H. Toy * †	1880
J. C. Gray	1875
C. S. Sargent	1872
N. S. Shaler ‡	1869
E. C. Pickering †	1876
C. R. Lanman * †	1880

* Not a graduate of Harvard University.

† Came from a professorship or assistant professorship in another institution.

‡ Previously assistant in the Museum of Zoölogy.

Professors who previously served in some lower grade, but not more than two years.

J. Lovering . .	1838	Tutor, 1836–38.
C. E. Norton .	1875	Lecturer, 1874–75.
H. W. Williams .	1871	" 1869–71.
T. H. Chandler .	1871	Adjunct Professor, 1869–71.
J. P. Cooke . .	1851	Tutor, 1849–50.
F. D. Allen * † .	1880	" 1873–74.
F. G. Peabody .	1881	Lecturer, 1880–81.

Professors who previously served in some lower grade or grades more than two years.

F. Bowen . . .	1853	Tutor, 1835–39.
E. A. Sophocles *	1860	Tutor, 1842–45 and 1847–59; Assistant Professor, 1859–60.
H. W. Torrey .	1856	Tutor, 1844–48.
E. Abbot * . .	1872	Assistant Librarian, 1856–72; Lecturer, 1869–72.
F. Minot . . .	1874	Instructor, 1869–71, Assistant Professor, 1871–74.
J. P. Reynolds .	1877	" 1869–77.
F. J. Child . .	1851	Tutor, 1846-51.
C. Ellis . . .	1867	Adjunct Professor, 1863–67.
W. W. Goodwin	1860	Tutor, 1856-60.
F. Bôcher * † . .	1870	Instructor, 1861-65.
D. W. Cheever .	1875	Adjunct Professor, 1868–75; previously Demonstrator.
E. W. Gurney .	1869	Tutor, 1857-63; Assistant Professor, 1863–69.
A. S. Hill . . .	1876	Assistant Professor, 1872-76.
J. M. Peirce . .	1869	Tutor, 1854–58, Assistant Professor, 1861–69.
J. C. White . .	1871	Adjunct Professor, 1866–71.
B. H. Nash . .	1881	Instructor, 1866-71, Assistant Professor, 1871–81.
R. T. Edes . .	1875	Assistant Professor, 1870–75.
J. K. Paine * . .	1875	Instructor, 1862-73; Assistant Professor, 1873–75.
G. L. Goodale * †	1878	Instructor, 1872-73; " " 1873–78.
H. P. Bowditch .	1876	Assistant Professor, 1871-76.
L. D. Shepard * .	1879	Adjunct Professor, 1868–79.
R. H. Fitz . .	1878	Instructor, 1870–73; Assistant Professor, 1873–78.
J. Trowbridge † .	1880	Assistant Professor, 1870–80.
W. G. Farlow .	1879	" " 1874–79.
C. L. Jackson .	1881	" " 1871–81; Assistant, 1868–71.
E. S. Wood . .	1876	" " 1871–76.
J. B. Ames . .	1877	Tutor, 1871–72; Instructor, 1872–73; Assistant Professor, 1873–77.
W. E. Byerly † .	1881	Assistant Professor, 1876–81.

* Not a graduate of Harvard University.

† Came from a professorship or assistant professorship in another institution.

Assistant Professors who did not serve this University in any lower grade.

C. J. White †	1870.	D. A. Sargent *	1879.

Assistant Professors who previously served in some lower grade.

A. Jacquinot *	1876	Instructor, 1872–73; Tutor, 1873–1876.
J. B. Greenough	1873	Tutor, 1865–73.
W. A. Rogers *	1877	Assistant at the Observatory, 1870–77.
W. Cook *	1879	Instructor, 1873–79.
C. L. Smith	1873	Tutor, 1870–73.
G. H. Palmer	1873	Tutor, 1870–73; Instructor, 1873.
G. A. Bartlett *	1876	Instructor, 1872–73; Tutor, 1873–76.
W. James	1876	Instructor, 1872–74.
J. W. White *	1877	Tutor, 1874–77.
H. B. Hill	1874	Assistant in Chemistry, 1870–74.
C. A. Brackett	1880	Instructor, 1874–80.
W. Faxon	1881	Instructor, 1872–73, 1877–81; Assistant.
L. Dyer	1881	Tutor, 1878–81.

It appears from these lists that twenty-one professors and two assistant professors were appointed to those grades respectively without having previously served here in any lower grade, and that of these twenty-three persons nine had held appointments in other institutions. On the other hand, it appears that thirty-five professors and thirteen assistant professors were appointed after having served here successfully in lower grades, and that of these forty-eight persons five had held appointments in other institutions. Out of fifty-six professors thirteen, or nearly one fourth, are not graduates of the University, and out of fifteen assistant professors six, or two fifths, are not graduates of the University. Of the seventy-one appointments here recorded fifty-five have been made since the beginning of the year 1869, and of this latter number fifteen (including two professors appointed from the Museum of Zoölogy before it became part of the University) were appointments not based on previous service in this University. These fifteen appointments were distributed as follows: —

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* Not a graduate of Harvard University.

† Came from an assistant professorship in another institution.

Professors drawn from other institutions	5
Lawyers (for Law professorships)	3
Minister (for a professorship of Theology)	1
Physicians	2
Editor	1
Naturalists (including two Assistants in the Museum)	3
	15

To obtain a complete view of the working of the existing methods of appointment and promotion, it is not enough to examine the steps by which the present professors and assistant professors reached their places; it is also necessary to inquire, first, how many persons have in recent years been appointed tutors, instructors, or assistant professors, but are no longer in the service; and, secondly, how many persons have been appointed tutors or instructors, and are still in the service in those capacities without advancement. To answer the first of these inquiries, a list is printed in the Appendix (I.) of all the persons appointed tutors, instructors, or assistant professors since 1860, who are no longer in the service. Annual appointments are not included in this list; because every such appointment is avowedly made for a temporary purpose, and implies no intention of renewal on the part of the University. The list contains the names of thirty-nine persons, of whom six are dead. The remaining thirty-three may be classified as follows: —

Became connected with other colleges (5 as full professors)	9
“ teachers in other ways	8
“ lawyers	4
“ men of science	4
“ authors or students	5
“ dentists	2
“ U. S. civil servant	1
	33

The second of the above inquiries is answered by the list, which may be found in the Appendix (II.), of all persons who have been appointed tutors or instructors since 1860, and are still in the service in those capacities. As before, annual appointments are not included in the list. Of the twenty-two appointments which the list contains, nine are not more than three years old, five others are not more than six years old, and none is more than ten years old. Six of the appointments are, moreover, in the Medical School, a department in which appointments are affected by considerations peculiar to itself. It is proper to add that these two lists contain the names of some of the best teachers and most useful men who have ever been, or are now, in the service of the University.

It will be obvious to any one who examines the above lists, particularly if he be acquainted with the whole careers of the persons whose names they bear, that the lower grades of the service are more and more filled with young men who have made elaborate preparation for the profession of teaching, and whose desire it is to teach single subjects to advanced students rather than the elements of a larger range of subjects to beginners. Now the professorial staff of a single institution cannot possibly afford outlet enough for all the young men of decided merit who pass the appropriate number of years in the lower grades of its service, even if the unwise rule prevail that no professorial appointments are made except by promotion within the corps. Other suitable outlets are obviously necessary, and a careful study of the lists printed in the Appendix shows that they are beginning to be found. They are chiefly professorships and instructorships in other colleges, masterships of academies and high schools, journalism and authorship, the scientific professions, and superintendencies and supervisorships of schools. The most appropriate of these outlets is the service of other universities; but the field in which there is the most urgent need of highly trained and devoted laborers is the great field of secondary education.

Another fellowship for graduates was added in the summer of 1881 to the seven which the University already possessed. The new fellowship is a peculiarly welcome gift, because it is to bear the honored and beloved name of the late James Walker, D.D., who was a Fellow of the Corporation nineteen years, an Overseer seventeen years, Alford Professor fifteen years, and President of the University seven years. The fund was raised by subscription among the pupils and friends of Dr. Walker, and now amounts to $10,000. In awarding the fellowship, the President and Fellows are to give the preference to a student of ethics, metaphysics, and those related branches of knowledge to which Dr. Walker chiefly devoted his life.

Two new scholarships, one of the annual value of $300, and one of $200, will be established in the Medical School from a part of the bequest of the late Edward M. Barringer of Schenectady. Mr. Barringer was a younger brother of John B. Barringer of Schenectady, the benefactor from whom the Scientific School received, upon his death in 1872 at twenty-three years of age, a bequest of more than $30,000. These estimable young men never had any connection, direct or indirect, with this University; but each, dying early without heirs or near relatives, was found to have bequeathed nearly the whole of his modest fortune to the President and Fellows of Harvard College, one selecting the Scientific School and the other the Medical School as the department to be benefited. The University will requite the spontaneous benevolence of these two young strangers towards it by keeping their names in tender remembrance, and faithfully doing, generation after generation, the good work for which they made provision. These two scholarships are the first which have been endowed in the Medical School.

The subject of the best distribution of scholarships and other beneficiary funds among the different departments of the University requires the attention of the governing boards and of intending benefactors. First instituted here in 1670, but chiefly given during the past thirty years, these endowments were all in aid of students in theology or arts, until Edward M. Barringer provided in 1880 for two scholarships in medicine. About $40,000 a year are now paid out in scholarships, loans, and other pecuniary aids to poor students; of which considerable sum about one eighth is paid to students of theology, somewhat more than one seventh to Bachelors of Arts or Science who are pursuing studies not professional, and about five sevenths to candidates for the degree of Bachelor of Arts. Of the money paid to undergraduates in arts, two thirds are returned to the College in tuition-fees; but the other two departments receive but a small return in this way. It is now desirable that the number of scholarships open to Bachelors of Arts or Science should be doubled or trebled; and that fifteen or twenty endowed scholarships should be founded in the Law School, and twice that number in the Medical School. The annual value of these scholarships ought not to be less than $250 apiece, and need not exceed $500. They should be awarded to students who are at once poor, able-bodied, and of proved capacity; and students and graduates of other institutions should be made welcome to the competition for them. Bachelors of Arts or Science coming from other colleges with evidences of high standing should be eligible in the first year of their residence at Cambridge.

These new needs result from changes which have taken place in the University since 1871. When the Law School only required a residence of eighteen months, and held no examinations whatever, and the Medical School only required attendance upon three annual courses of lectures which were all given between November 1st and March 1st, it was a comparatively easy and inexpensive matter to pass through either of these Schools with credit; but now each School demands three years of continuous and strenuous labor, which leaves neither time nor strength for simultaneously earning a livelihood. To make the best use of the opportunities and privileges of either School requires the student's undivided attention and force; so that the student who is compelled by poverty to give part of his time to teaching or other productive labor does not graduate from the School so well equipped as he would otherwise have been, and thus suffers a loss which must affect injuriously not him only but the School. If it be said that the student of law or medicine is pursuing a professional study which is intended to enable him soon to earn his living, the answer is that for the present needs of the student of law or medicine the prospective income of his early years of practice is unavailable except as security on which to borrow money, and that this security is not marketable. If it be said that a capable man of twenty-one years of age ought to be able to lay up in advance money enough to support him during three years of professional study, let it be considered in reply how few are the occupations open to very young men in which as much as $1,500 can be laid by in any moderate number of years, even with the utmost industry and economy, and how sharp is the competition for such lucrative places. In that competition a young man who seeks a place only for a temporary purpose, without intending to remain in the business, whatever it may be, is at a serious disadvantage. As a matter of fact, it has already become very difficult, though not impossible, for a young man to win his way through either the Law School or the Medical School without help from parents or friends; and since the difficulty of this undertaking must increase from year to year, as population becomes denser, special preparation for trades and other callings completer and commoner, and the demands of the Schools themselves greater, both Schools will finally be inaccessible to poor students, no matter how meritorious and promising, unless scholarships are established in them. The President invites the special attention of the Overseers to the full discussion of this subject and of the true conception of professional education in a university, which will be found in the subjoined report of the Dean of the Law School.

The graduate department in arts can hardly be said to have existed before 1869, and has been, in the main, developed during the past ten years. Its students have been in great part Harvard Bachelors of Arts or Science, and the seven scholarships, or fellowships, which it has possessed, have generally been used to maintain graduates of Harvard at European universities. The department needs a number of scholarships which would enable graduates of other American colleges to pursue their studies here. This need might be met, temporarily and in part, by using some of the scholarships, which are now attributed exclusively to the undergraduate department, for graduates or undergraduates indifferently, in such proportions as might in each year seem most expedient; and the terms of gift of many of the scholarship funds would doubtless permit this extension of their application to this new class of students in arts; but the need can be really supplied only by the endowment of new scholarships intended especially for persons who are already Bachelors of Arts or Science.

There is another new and increasing class of students in arts to whom there is good reason for extending the benefits of the scholarships and other beneficiary funds, namely, the unmatriculated, or special, students in arts. These students are persons who join the University, without passing any admission examinations, and without aiming immediately at any degree, to study such subjects as they themselves select, and are found by the instructors in those subjects competent to pursue. The category naturally includes a considerable variety of persons; but the great majority of the students who have belonged to it have been desirable members of the University, and some of them have been young men of unusual power and merit. Increase in the number of these special students will not only add directly to the influence and usefulness of the University as a teaching body, but will also have an indirect effect of perhaps equal value. If all competent young men can freely pursue here the studies of their choice on equal terms with any other students, the University does not refuse to give instruction when it maintains rigid requisitions for its degrees; it only denies these traditional testimonials to persons who do not fulfil all the prescribed conditions. To increase the number of special students it is necessary to assimilate their discipline and privileges in all respects to those of other students in arts, and especially to make them eligible to scholarships and all other beneficiary appointments.

Early in the year 1880–81 a circular was sent to the parents or guardians of the 828 undergraduates, asking if they held daily family prayers in their households. The number of families addressed was not so large as the number of students; for some families had more than one son in College, a few students had neither parents nor guardians, and in a few cases the parents or guardians were inaccessible. The number of replies received was 741; of which 211, or two sevenths, answered Yes, and 530, or five sevenths, answered No. Nine persons who answered Yes expressed the desire, nevertheless, that attendance at College prayers should be voluntary, and thirty-six of those who answered No expressed the desire that attendance should be compulsory. Some of the negative replies stated that the practice had been discontinued, and gave reasons for the discontinuance, such as residence in the suburbs and the necessity of catching early trains for the city, the growing up of all the children and their departure from home, the presence of invalids in the family, and the different religious opinions and practices of masters and servants. The object of the inquiry was to ascertain how much support morning prayers at College had in the habits of the families from which the students came.

The resignation of the Plummer Professor, which took effect at the close of the year, and the non-appointment of a successor, obliged the Corporation to make a provisional arrangement for the conduct of the week-day prayers and the services of Sunday morning in Appleton Chapel. They placed the matter in the hands of a committee consisting of the President and five members of the Academic Council; and this Committee in June last made the arrangements which went into effect at the beginning of the current year. The hour of morning prayers was changed from a quarter before eight to a quarter before nine; and all the ministers officially connected with the University and living in Cambridge or Boston were invited to conduct prayers by turns, each for a few weeks. Nine ministers, belonging to four different denominations, will accordingly conduct prayers, each for about a month, during the current year. After some experiments the two ministers, members of the Board of Overseers, — the Rev. Drs. Edward E. Hale and Phillips Brooks, — who conducted prayers during October and November, settled upon a convenient and interesting order of service, in which the daily responsive reading of a psalm was introduced, and the musical element in the service was increased. The committee further provided for the Sunday services by inviting eminent ministers of various denominations to occupy the pulpit a Sunday at a time. The cost of these provisional arrangements for the current year was limited to the amount of the former salary of the Plummer Professor. The whole experiment, which was entered upon not voluntarily but from necessity, has proved both interesting and instructive.

In the last annual Report (p. 27) a table was given which showed the net reduction of number in eight successive classes during the four years between entrance and graduation, beginning with the class which entered in 1869 and graduated in 1873. The reduction exhibited was the excess of the number of persons who, from all causes, left each class during the four years of its course over the number of persons admitted to the same class with advanced standing. It appeared from this table that this reduction in number had been considerably larger since the year 1874–75 than it was before, and that in the classes of 1875 to 1880 inclusive it amounted, on the average, to 26.7 per cent. During the past year the College Faculty, at the instance of the Corporation, made a new and thorough examination of this subject, and, through their Dean, presented to the Corporation an exhaustive report upon it. Instead of studying the net loss of each class during four years, they studied the gross loss of the whole College each year, thus eliminating from the results the variable number of admissions to advanced standing. They then discriminated between losses from failure in scholarship and losses from other causes, and finally corrected the apparent annual losses from failure in scholarship by deducting the cases of subsequent restoration to College or subsequent graduation. The table on the next page, which is taken from the report sent to the Corporation, exhibits the results of their inquiries. This table does not disclose any tendency to a progressive increase of total annual loss, although the annual loss has been on the average greater since the year 1874–75 than it was before. The losses by failure in scholarship, which make less than one half of the whole, show little tendency to increase, if comparison is made with the average of the whole period, and no tendency whatever to increase since

College Year.	No. of Students Oct. 1.	Percentage of losses from all causes.	Percentage of losses		Net loss by failure of scholarship, deducting those afterwards graduated or now in College.
			from failure in scholarship.	from other causes.	
1870–71	608	7.	3.1	3.8	2.5
1871–72	621	10.	5.2	4.8	4.8
1872–73	636	6.8	3.	3.8	2.4
1873–74	706	8.2	5.2	3.	4.8
1874–75	716	12.5	6.	6.5	4.7
1875–76	776	10.	5.4	4.6	4.6
1876–77	823	13.4	6.	7.4	4.7
1877–78	813	12.4	5.	7.4	3.9
1878–79	819	11.8	4.5	7.3	3.7
1879–80	813	10.2	6.2	4.	4.9

1874–75. Finally, the net losses by failure in scholarship recorded in the last column of the table exhibit no tendency to increase since the year 1873–74, but are, on the contrary, remarkably uniform. The Faculty are of opinion that the increased percentages of gross annual loss between 1874 and 1879 were due to the general commercial depression. During the years which are covered by this inquiry many changes have been made in the College regulations, — some giving greater freedom to the student, and others making greater demands upon him, — and it is obviously important that the governing boards and the University public should get a just view of the resultant effect of these changes upon the number of failures in the College career through lack of scholarship. For the past seven years the annual number of these failures has been, on the average, four and one half per cent of the whole number of students. This small percentage would, of course, be sensibly larger were it not for the stringency of the admission-examination, at which about fifteen per cent of the candidates are annually rejected.

In January last the Corporation, guided by the advice of the College Faculty, and acting in the light of the experience gained at Cincinnati and Chicago during the past five years, decided that the June examinations for admission to the College, Scientific School, Law School, and Medical School should be simultaneously conducted at Cambridge, Exeter, N. H., New York, Philadelphia, Chicago, Cincinnati, and San Francisco, and that every person examined for admission to the College at any place other than Cambridge should pay in advance a fee of five dollars, — the whole fee of a candidate who divides his examination between two years being payable in the year when he begins his examination. Examinations were accordingly held at all the above-named places in June last. A College officer is sent to each place at which an examination is conducted, to give advice to candidates, oversee the whole examination in all its details, and confer with the friends of the University and the friends and teachers of future candidates. The whole examination is conducted in writing from printed questions, which are brought from Cambridge and are identical at all the different localities. The papers written by the candidates are sent immediately to Cambridge, and are there passed upon by the same set of examiners who pass upon the papers of the candidates presenting themselves in Cambridge. The result of his examination is made known to each candidate by mail. The system is very simple, and its results are wholly satisfactory. Although the examinations of last June at places other than Cambridge were held at very short notice, — only about four months, — they seem to have caused an immediate increase in the number of students from New York, New Jersey, Pennsylvania, Ohio, Kentucky, Illinois, and California. The whole cost of these examinations to the University, not including advertising, was $742.66, and the receipts from the candidates were $500. The receipts may not be so large another year, because all the candidates paid the fee last June, whereas hereafter only those who present themselves for the first time will have the fee to pay; but the net annual cost of the examinations will probably not exceed $500. It would have cost the candidates examined last June elsewhere than in Cambridge at least $7,000 to come to Cambridge for the purpose; and only by making two journeys to Cambridge could they have secured the advantages of passing the preliminary examination in one year and of presenting themselves in June of another year to complete their examinations. The strong argument in favor of conducting the admission-examinations at several convenient centres distributed over the country, in addition to the argument of economy, is that the practice will help to make the resort of students to this University measurably representative of all parts of the country. There is no reason why other universities, Western as well as Eastern, should not adopt the same policy to their own advantage and that of the country. Indeed, Yale College, the College of New Jersey, and Vassar College have already done so, though with some diversities of method. The system might readily be extended considerably; for with the existing means of communication by telegraph, mail, and express, it is nearly as easy to conduct an examination at a given time in twenty places as in one. If colleges having requisitions for admission which are identical in whole or in part would unite in conducting common examinations at many different centres, the convenience of preparatory schools and of the public would be greatly promoted, and an increasing number of young men would be year by year gathered from all parts of the country into institutions of national resort wherever situated.

After the Christmas recess in the year 1880–81, Professors Lane and Goodwin took part for a time in the instruction of the advanced sections of the Freshman class in Latin and Greek, and, to relieve those professors from any necessity of repeating their lectures, two sections of the class were united once a week to form one section of nearly one hundred persons. The experiment was entirely successful, and proved that there were great advantages in bringing the senior professors into contact with the best students of the class, and in replacing a part of the drill, which required small sections, by instruction which could be given to large numbers at once. Professor Byerly had for several years dealt successfully with large divisions of the Freshman class in the subjects of trigonometry and analytic geometry. The whole class had listened with profit to lectures on chemistry by Professor Cooke, and the class, divided into two large sections, had attended lectures on Greek literature by Mr. Dyer, and on Latin literature by Mr. Gould. These favorable results pointed the way to a rearrangement of the work of the Freshman year which would secure the advantages above mentioned, and also remedy a serious evil of long standing, — an evil which affected primarily the tutors and other instructors of the Freshmen. The Faculty had long regretted that any instructor should be confined to the work of the Freshman year, which is elementary, prescribed, and often repeated; and the instructors themselves had been very desirous of getting the variety and stimulus which some elective, and therefore more advanced and interesting, work would give them. In May last the work of the ensuing Freshman year was recast in such a way as to bring in for several months professors of Latin, Greek, Mathematics, and German as instructors, to reduce the number of sections on the average, to replace drill by instruction to a certain extent, and to give every instructor of Freshmen some elective work with higher classes. It was also found possible to assign to Professor A. S. Hill a share of the instruction given to Sophomores in prescribed rhetoric. These happy changes went into effect at the beginning of the current year, and will doubtless prepare the way for a completer transformation.

The College lived quietly during 1880–81 under the revised regulations which the Faculty adopted in 1879–80, at the close of a period of debate and transition which had lasted ten years. The new regulations worked well, and no proposition was made to amend them. The experience of the year confirms the opinion expressed in the last Report, that the regulations are likely to remain for a considerable time without fundamental alteration.

The Dean of the College Faculty, in his report subjoined, again presents an interesting and instructive statement of the development and working of the elective system. It is to be inferred from his account of the actual experience of the College during a period of ten years that the system does not tend to bring about the extinction of the traditional studies called liberal; because these studies, though pursued by a smaller proportion of the students than formerly, are pursued by those who choose them with greater vigor and to better purpose than they were ever pursued as parts of a prescribed curriculum. The tables of the Dean's report also indicate that the scientific turn of mind is comparatively rare among the young men who enter the College, a large majority of the students preferring languages, metaphysics, history, and political science, to mathematics, physics, zoölogy, and botany. Whether this preference is the result of genuine natural predisposition, or an effect of the training supplied by the secondary schools, it would be hard to determine. Finally, whoever reads the history of the development of the elective system, as it is recorded in the successive annual reports of the Dean of the College Faculty since 1870, will arrive at the well-grounded conviction that every extension of the system has been a gain to the individual student, to the College, and to every interest of education and learning; and will also see reason to believe that the time is not far distant when the few subjects still prescribed for all students will in their turn become elective.

Near the close of the year the Parkman Professorship of Theology was filled by the election of Rev. Francis

Greenwood Peabody, who had been serving during the year with great acceptance as Lecturer on Ethics and Homiletics. Mr. Peabody brings to the professorship an unusually prolonged training in theology and ethics, successful experience in preaching, and a strong interest in teaching.

It was the new endowment of $140,000, begun in the spring of 1879 and completed in the autumn of 1880, which enabled the Corporation to fill the Parkman Professorship, and prevented the School from falling into serious pecuniary embarrassment, as the rate of interest earned upon its funds, and the income from the Bussey real estate, fell year after year. The School lives almost exclusively upon the income of its endowments; thus, in 1880–81 the tuition-fees paid by regular students did not exceed $800 in amount, and during the current year the amount of these fees is not greater. A rule that no person should be admitted as a regular student unless he were already a Bachelor of Arts could therefore be adopted by the Divinity School with small pecuniary sacrifice; for more than half of its regular students are ordinarily Bachelors. Special students might, of course, continue to be admitted without any such restriction. The young graduate in theology, unlike the young lawyer or physician, bursts at once into full professional activity. There is the more reason for insisting that he should be a person of maturity of mind and character as well as of thorough and ample training, and for framing the rules of a university school of theology in the way best adapted to secure this end.

In the last Report the urgent need of a new building for the Law School was briefly stated, and within a few weeks a friend of the University, whose name is to be withheld for the present, informed the President that he desired to supply the need, and was prepared to devote $100,000 to the purpose. The Corporation immediately began to seek for a suitable site for the projected building, and after much consideration, consultation with the professors of the School and other persons interested, and some negotiations with persons who had desirable sites for sale, decided to place the new building on the northerly side of Holmes Place. To this end it became necessary to buy 33,380 feet of land, known as the Royal Morse estate, which had a narrow frontage on Holmes Place, and on all other sides adjoined land already belonging to the Corporation. This purchase was effected at a fair price, and a very satisfactory site as regards aspect, and security against dust, noise, and fire was thus secured. The plans of the building have been studied with great care, and upon the opening of the coming spring the construction of the building will be begun.

Another pressing want of the Law School remains unsupplied, and is affecting unfavorably the development of the School. Experience has shown during the past two years that four professors, with the aid of an instructor in torts, cannot give the amount and variety of instruction which are needed to make the three years' course as attractive and useful as possible. The income of the school from its tuition-fees and its small endowment is barely sufficient to meet its expenditures upon the present footing; so that the appointment of a fifth professor is impossible without an increase of resources. These are the horns of the dilemma: to improve the School and so increase the amount of the tuition-fees a fifth professor is needed; to enable the School to employ a fifth professor more tuition-fees, or other new resources, are needed. The best solution of the difficulty is the adequate endowment of a new professorship. Surely the Harvard Law School has deserved well enough of the community and the profession to count with confidence upon soon receiving this addition to its means of usefulness.

The site for the new building of the Medical School at the southeastern corner of Boylston and Exeter streets, Boston, was bought in April, 1880; but some abortive negotiations about another site, which the majority of the Medical Faculty would have preferred, had it been obtainable, put off the preparation of plans for the building until the following autumn. In November, 1880, the preparation of the plans was intrusted to Messrs. Ware and Van-Brunt, and a large committee of the Faculty was appointed to give advice as to the size and internal arrangement of the building, and the fittings which its peculiar destination would call for. The desire of the Corporation and the patient endeavor of the architects were to devise a building adapted in every respect, within and without, to its probable uses, so far as they could be foreseen; and the committee of the Faculty spared no pains in studying these uses, and devising the best means of providing for them with all practicable convenience and completeness. As four fifths of the building were to be taken up by the laboratories and lecture-rooms devoted to the departments of anatomy, physiology, histology, chemistry, and surgery, the requirements in regard to light, heat, and fresh air were unusually stringent, and the provision of flues, drains, and fittings for water, gas, and steam was elaborate and peculiar. It was further necessary that the exterior of the building should be not unsuitable to the handsome quarter of the city in which it was to be placed, and that throughout the structure every precaution should be taken against fire. Under these circumstances it was not surprising to find, when the plans and estimates were completed after six months' labor, that the cost of the building would not be less than $190,000. After paying $83,325 for the site, there remained of the money raised by subscription in 1874–75, with its accumulations, a little less than $90,000. In this state of things, the Medical Faculty, moved by the hopefulness of a few of their number, resolved that an effort should be made to raise another considerable sum by subscription, and in three weeks two members of the Faculty, almost unaided, procured the subscription of $103,720. Work was begun upon the building early in June last, and it is hoped that the whole building will be ready for occupation by the first of January, 1883.

The next thing which needs to be done for the Medical School is to procure scholarship funds and endowments for its professorships, or a large permanent fund, the income of which shall be applicable to salaries. So long as medical schools are conducted as private ventures for the benefit of a few physicians and surgeons who have united to form a corporation or a faculty, the community ought not to endow them; for it is contrary to the best interests of the public that medical education should be conducted in that way. The experience of the past hundred years in this country proves that such medical schools will not be endowed. While several millions of dollars are yearly devoted to education in arts and in theology by intelligent and public-spirited men and women, hardly anything is given for education in medicine; because almost all American medical schools are organized and carried on as commercial adventures. In 1871 the Harvard Medical School ceased to be in any sense a private venture, and became a constituent department of the University, devoted, like the other departments, to the advancement of science and learning, and to the amelioration of the conditions of human life. Since that year it has received by gift and bequest $270,000; but this sum, though considerable, is not one third of the endowment which it urgently needs. The objects of endowment in medical education are precisely the same as in other departments of education, namely, to provide permanent means of securing the most competent persons for its professorial chairs, of helping poor students of rare capacity, and of advancing knowledge by new researches. It is the primary object of medical science and art to defend and improve the life that now is, — the life of the individual, of the family, and of society; but since it is impossible to separate physical from mental and moral well-being, the domain of medical science is really co-extensive with human nature. Whatever motives influence benevolent persons to endow institutions which teach the humanities or theology should also avail for the endowment of medical education. The seed and the fruit, the planting and the harvesting, may be different in kind; but these various cultures all have in view a common end, namely, the improvement of man's high estate.

The Dental School continues to send out year by year a few well-instructed dentists, but is quite unable to pay its professors and instructors any salaries. The attempt made during the year to raise the sum of $30,000 for the School did not succeed; but last summer a number of the graduates, who are all men still young, subscribed $1,900 for its benefit, most of the subscriptions being payable in five annual instalments. This evidence of affection and confidence on the part of the men who best know what the School has been, is, and ought to be, was peculiarly welcome to the Corporation and Faculty. There is, undoubtedly, some difference of opinion among dentists as to the nature and extent of the training which a young man who means to be a dentist should receive. Some dentists maintain that a dentist, like an oculist, is a physician with a specialty, and that nothing short of the full course for the degree of Doctor of Medicine can be satisfactory; others say that a dentist is simply a fine mechanic, and that there is little use of any training except that of the eye and hand. The Dental School occupies an intermediate position, which satisfies neither of these extreme parties. It should, perhaps, be considered by those who maintain that the dentist should receive the same long and costly training as the physician, that a dentist cannot work so many hours a day, so many days in the year, or so many years, as a physician; and that the dentist also differs from the surgeon, oculist, or other specialist in medicine, in that he is not called upon to take such grave responsibilities, and therefore does not have opportunities for charging large fees; in short, that the dentist's occupation does not promise, on the average, so good an income for so long a time as the physician's, and therefore will not justify so costly a preparation. On the other hand, it must not be forgotten that every dentist needs to know something of chemistry, physiology, histology, and anatomy, and that coarse and ignorant men, however good mechanics they may be, are not suited for a calling which is supported chiefly by the better educated part of the community. As a mere question of university organization, a separate Dental School, or a Dental Faculty distinct from the Medical Faculty, is by no means indispensable to the maintenance of thorough instruction in dentistry, and the conferring of a dental degree. The same instruction which is now provided might be given under the direction of the Medical Faculty, and the degree of D.M.D. still be conferred upon conditions very similar to those which now obtain.

In the last Report an irregularity was pointed out which, though not very harmful, still required correction, — the irregularity, namely, that persons entered the Scientific School as special students for no other reason than to gain admittance without examination to College classes, under the general rule that a member of one department of the University, who pays the full fee of $150 a year, may take any courses of instruction in any other department which he is found competent to pursue, except special laboratory courses. This irregularity has been corrected by making a change in the rules concerning special, or unmatriculated, students in the College. From 1876–77 to 1880–81 inclusive a few persons had been each year admitted to the College without examination, to pursue any studies, at choice, for which they were found competent. These persons were not candidates for a degree, and were classed as unmatriculated students; but no person was thus admitted who was less than twenty-one years of age. The College Faculty last year repealed this restriction as to age; so that the College, like every other department except the Medical School, now stands open, without any barriers in the form of admission-requisitions, to all special students who are not candidates for any degree. The immediate effect of this change of rule was that the number of unmatriculated students in the College rose from 15 in 1880–81 to 34 in 1881–82, while the number of special students in the Scientific School fell from 26 in 1880–81 to 17 in 1881–82.

It has been noticeable for several years past that about one half of the regular students in the Scientific School pursue the four years' course in natural history. The facilities offered by the School to students of natural science are ample, and the amount and variety of the instruction given are great; but the course does not lead to any well-defined career, so that the number of students who pursue it must necessarily be small. Very few secondary schools employ any special teacher of natural science, — to their shame be it said. For competent teachers of Greek, Latin, and elementary mathematics there is a large and steady demand, but for well-trained teachers of botany, zoölogy, chemistry, and physics, as for teachers of English and history, the demand is very small and uncertain. The graduates in engineering have of late been few in number, but they have been thoroughly taught, and have promptly found appropriate employment.

By the munificence of Mrs. Samuel Hooper, the fund of the Sturgis-Hooper Professorship of Geology was increased, March 30, 1881, by the sum of $30,000, so that it now amounts to $100,000. The income of the fund is to be paid to the professor as salary up to $5,000, and the excess of the income, if any, over that sum is to be appropriated for the expenses of the department under the direction of the professor. In the following June the Corporation received from Professor J. D. Whitney a proposition to give to the President and Fellows, for the use of the Sturgis-Hooper Professorship, his geological and geographical library and collections (other than mineralogical) upon the conditions: (1) That the full salary of the Professorship be paid to him during his life; (2) that the Faculty of the Museum of Comparative Zoölogy provide the necessary rooms for the use of the said professor, and for his collections and library; and (3) that Professor Whitney's successors be appointed upon nominations made by the said Faculty. In the following July the Corporation voted that they should accept Professor Whitney's library and collections upon the terms proposed.

During the year 1880–81 the subscription towards a new endowment for the Botanic Garden was increased by about $20,000, making the whole amount thus far secured $42,265. The estimates made by the Director in 1879 led him to the conclusion that the sum needed in order to put the Garden upon a firm footing was $80,000, and it is certain that these estimates were not too high. Since the opening of the present year the will of the late John A. Lowell, a constant supporter and friend of the Garden, has been found to contain a bequest in its favor, to make permanent the annual gift of $1,000, which Mr. Lowell, in his lifetime, was in the habit of sending anonymously to the Treasurer. The income of this bequest will not, however, be a new resource.

The herbarium and library make such important parts of the botanical establishment which is situated at the Garden, that it has been thought proper to include in the annual report of the Director a report on the progress of the herbarium and library by the Curator and Librarian.

The net income of the Bussey Trust Fund was no better in 1880–81 than in 1879–80; but the instruction given in the Bussey Institution was all maintained. Mr. Edward Burgess again gave to the School his valuable services as Instructor in Entomology. The School exhibits this phenomenon: Six competent teachers give instruction in the branches of science on which agriculture and horticulture depend, and in the arts of farming and gardening; the tuition-fee is remitted, in accordance with the directions in the founder's will, to any student who is unable to pay it; the School is well supplied with the appliances and collections necessary to give all its students practice in horticulture, indoors and out, laboratory work in chemistry, botany, entomology, and the anatomy and physiology of domestic animals, and field-work in botany and entomology; the students of the School have also the right to attend any courses of instruction given in other departments of the University which they are competent to pursue; and the result is, that the School has on the average about six students a year. The publication of the Bulletin has been suspended for lack of money to pay the expenses of researches and the cost of printing. It does not seem probable that the real estate in which the Bussey Fund must be kept invested, under the will of Mr. Bussey, will again yield within any assignable period the net income in reliance upon which the Bussey Institution was opened in 1871.* Sooner or later it will be necessary, in the interest of the Law School, Divinity School, and Bussey Institution, to apply to the Legislature for permission to sell certain detached parcels of land belonging to the Trust which now yield no income, and perhaps some of the remoter portions of the estate at West Roxbury. The Fund is charged with annuities to the amount of $6,800 a year.

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* From $33,000 to $35,500 a year, of which one half went to the Bussey Institution, one fourth to the Law School, and one fourth to the Divinity School.

Pending the decision of the city of Boston on the question of making a contract with the University for the use of the Arnold Arboretum as a part of the system of public parks, the Director of the Arboretum has not attempted to do any work except to care for and increase the plantations where they now stand in the reserved grounds of the Bussey Institution, and to keep up the exchanges with other institutions. The special herbarium and museum connected with the Arboretum have been much increased in size and value under the care of Mr. Robinson.

The chief events of the year in the Library were the conversion of the Library Bulletin into a Bulletin of the University; the adoption of a system of ordering through the Library all books to be bought for any department of the University except the Law School, and of cataloguing at the Library all books received by any department; the improvement of the vaulted cellar of the original Gore Hall so as to gain at moderate expense a large and dry store-room for bound newspapers and duplicates; the opening of the Library on Sunday afternoons; the issue of the University Calendar; and the receipt of the books bequeathed to the President and Fellows by the late Thomas Carlyle (see Appendix III.). The subjoined report of the Librarian deals with all these matters in detail, and also exhibits the number of books and pamphlets added during the year to the various collections which make up the University Library, shows that the use of books in Gore Hall is increasing, and describes the progress made in the rearrangement of the Library, and in the catalogues.

Unless means can shortly be found to reconstruct the interior of the main hall, which is now used as the reading-room, the work of classifying and arranging the books by subjects in the new stack will have to be suspended; for a large space in the stack is now occupied by books which are to be restored to the original building. The Corporation hold one fund which can ultimately be devoted to the reconstruction of the interior of Gore Hall, namely, the Gore Annuity Fund, which amounted, August 31, 1881, to $20,776.07. From this fund the recent improvements in the basement of the building were paid for.

The force employed in the catalogue department proper has been reduced, rather than increased, of late years, and is hardly able to do more than catalogue the new books and pamphlets received and to correct the two catalogues (of authors and subjects) as the revision of the subject-catalogue and the rearrangement of the books in the new stack proceed. There is a considerable mass of books in the Library which have never been catalogued upon the short cards; and the present force is not large enough to attack this mass with any hope of rapid progress. As the card catalogues increase in bulk, it becomes very plain that a catalogue made of printed slips attached to the pages of a bound scrap-book in such a way that they could be easily shifted would be much more compact and convenient.

The second of the Bibliographical Contributions issued by the Library during the year was a list of the publications of Harvard University and its officers during the ten years from 1870 to 1880. This list exhibits the number, scope, and volume of the official publications of the University, and the productiveness of its officers of instruction and government in the various fields of literature and science. The President invites the attention of the Board of Overseers and of all the graduates and friends of the University to this significant list.

The subscription of 1878, which gave to the Observatory $5,000 a year for five years, has thus far been very economically and profitably employed. The staff included during the past year ten men and six women; all the principal instruments were in active use; good progress was made in the reduction of the observations; and Volume XIII. of the Annals will shortly be issued. The subjoined report of the Director gives an interesting description of the various work accomplished during the year, and conveys a vivid picture of scientific research planned with intelligence and prosecuted with enthusiasm. In two years more the subscription of 1878 will be exhausted; and it is for the friends of the Observatory to consider, well in advance of the actual need, how the activity of the establishment is to be maintained.

The large addition to the Museum which the Curator is building at his own expense was finished externally, and the grounds surrounding it were graded, during the year 1880–81; but the interior will not be finished before January, 1883. There is great advantage, in a building which is to be filled with tight cases and drawers for the exhibition and storage of apparatus, models, or specimens, in letting the brick walls stand at least six months after the roof is made tight before they are plastered, and in allowing a similar interval to intervene between the finishing of the plastering and the putting in of the woodwork.

The publications of the Museum for the year 1880-81 greatly exceed in bulk and value those of any previous year, and include important researches in physical geography, geology, and zoölogy. Two valuable collections of invertebrate palaeozoic fossils have been bought during the year; and two experienced collectors were engaged during the open season in collecting fossil vertebrates and cretaceous plants for the Museum at some of the rich localities of Western Kansas. It is the purpose of the Curator to make the Museum as rich in geological material as in zoölogical, and the year 1880–81 saw good progress made in this direction.

When the northwestern corner block of the building is ready for occupancy, the number of exhibition-rooms open to the public will be rapidly and considerably increased. The plans to this end were made long since, and much of the preparatory work has already been done.

Last spring it was made known to the Corporation through Mr. Alexander Agassiz that a friend of the University stood ready to build a physical laboratory at a cost of $115,000, provided that a permanent fund of $75,000 were raised, the income of which should be appropriated to the running expenses of the laboratory. This munificent offer the Corporation were, of course, eager to accept, and they at once set on foot a subscription for the current expense fund, on the procuring of which the principal gift was conditioned. To the present time only $30,000 have been subscribed toward that fund. The offer is still open, but the Corporation, not knowing how long it will remain so, are very anxious to further that subscription.

In studying the question of sites for two large buildings — the Law School and the proposed physical laboratory — the Corporation were impressed with the fact that the University may best extend itself northward from Kirkland Street and Holmes Place. It already owns land in that direction quite equal in area to the College Yard, and the acquisition of certain parcels needed to make the shape and boundaries of its territory satisfactory will be facilitated by the fact that the part of Cambridge which lies not north but west of the College is already considered the most desirable for private residences.

Sever Hall was occupied at the beginning of the year, and the whole College — teachers and students — entered with great satisfaction upon the enjoyment of this munificent gift. Before the building was finished and furnished the unrestricted Sever Fund of $20,000 was drawn upon to the extent of $11,000; but if the whole of that fund had been spent upon the monumental building which bears the Sever name, the use of the fund could not have been considered other than appropriate. As the public finds it hard to understand how an institution which receives such great gifts as the Hemenway Gymnasium and Sever Hall can be constantly embarrassed for lack of money, it may be instructive to mention that the cost of carrying on the Gymnasium in 1880-81, including the salary of the Director, was $4,843.11, and the expenses for the year in Sever Hall, with no allowance made for insurance or repairs, amounted to $2,347.20. In other words, these two most useful and desirable gifts have involved the Corporation in a new annual expenditure representing the income of about $140,000; but this new principal the Corporation have not had the good fortune to obtain.

In the first four months of 1881, G. Stanley Hall, Ph.D., University Lecturer on Pedagogy for the year 1880–81, gave a course of twelve lectures on Saturday mornings at Wesleyan Hall, Boston, to an audience composed chiefly of teachers. The action of the University in directing attention to the philosophy of teaching, and in causing Dr. Hall's lectures to be delivered at a time and place convenient for the teachers of Boston and the vicinity, was received with favor by many persons interested in the subject, and the Corporation received, at the close of the course, the public thanks of the teachers who had attended it.

In April last, Henry L. Higginson, Esq., made an offer to the Corporation to provide, without cost to the College, a series of six orchestral concerts in Sanders Theatre during the winter of 1881–82, at a price not to exceed fifty cents for the single admission. The Corporation gladly accepted this generous offer, and placed Sanders Theatre at Mr. Higginson's disposal on such days as he should select. These concerts have already begun; they cultivate the taste for good music, and bring an exquisite enjoyment within the reach of slender purses.

In May, 1881, the Oedipus Tyrannus of Sophocles was performed in Greek in Sanders Theatre by students of the University, with the aid of one of the instructors in elocution. To the preparations for this performance the most assiduous labor was given during several months by the professors connected with the departments of Greek and Music, the actors, and the singers. New music of modern form was composed for the choruses of Sophocles, and was sung with orchestral accompaniment by a chorus of fifteen students, assisted by a supplementary chorus composed chiefly of graduates. The costumes, scenery, and appointments were all carefully studied. The actual performance, thus conscientiously prepared, was dignified, impressive, and memorable. Six thousand persons witnessed the five performances with grave interest and delight.

The financial condition of the College proper gives much concern to the Corporation. The withdrawal of nearly $100,000 from the free capital in 1875–76, to pay for the extension of Gore Hall, the fall in the rate of interest on its invested funds (two per cent in seven years), and the heavy additional expenses which it has been yearly obliged to incur, taken in connection with the cessation since 1876–77 of the former rapid increase in the number of students, have occasioned three deficits within the past four years. These three deficits have taken from the free capital of the College nearly $50,000. To be sure, no such loss would appear if the total capital of the College on September 1, 1877, were compared with the total capital on September 1, 1881; because in that interval new gifts of unrestricted funds have been received to an amount somewhat greater than $50,000; but it remains strictly true, nevertheless, that the College has been living beyond its income for four years, to the average amount of $12,500 a year. The deficit for 1880–81, amounting to $34,469.19, is the largest which the College has ever incurred, and has forced the Corporation to consider anxiously the measures necessary to prevent the recurrence of such a reduction of capital. After deducting from the deficit all those expenses of the year which can properly be called extraordinary, there remains an excess of current expenses over receipts to the amount of at least $15,000. Since the beginning of the current year a gift of $100,000, derived from the estate of the late Eben Wright, has been received from T. Jefferson Coolidge, Esq., who has directed that the income go towards the cost of administration and service in the Library. As the College bears the whole cost of carrying on the Library, this most timely gift will relieve the College by the whole amount of the income to be derived from it, namely, by $4,000 a year from January 1, 1882. The Corporation will this year cut off certain expenses in the Library of recent origin, and charge their just proportion of the expenses of the Gymnasium and of clerk hire in the Bursar's office to the Divinity, Law, and Scientific Schools; and next year will in addition charge special fees for supplies to all students who work in laboratories, and abolish a few unimportant courses of instruction, the loss of which, they believe, will not be seriously felt. They see some reason to believe, moreover, that the number of students will next year increase. It will, however, be impossible to avoid a large deficit for the current year.

While the Corporation feel it to be their duty to prevent, if possible, the recurrence of large deficits, they wish to inform the alumni and friends of the College that the expenditures which have caused the deficits of the past four years were, in their judgment, expedient and in some sense necessary, and that reduction of the present scale of expenditure cannot be effected without loss and injury to the institution. To prevent such reduction, new funds would be needed to a total amount not less than $250,000, the income of which should be applicable to the salaries of teachers or administrative officers, to the cost of administration and service in the Gymnasium, Chapel, or Library, or to the general expenses of the College. The Class Subscription Fund is just such a fund, and the Corporation observe with regret that subscriptions to that fund have of late years slackened. The last instalment of $20,000 was paid to the Treasurer in 1878, and the contributions of the graduating classes have fallen off very much since 1877.[*]

Very few of the colleges and universities of the United States publish annual reports of their doings and their condition, although the practice is growing in favor. They might very properly be compelled to publish annual financial statements, by a modification in the laws concerning exemption from taxation, — a modification which is for other reasons desirable. It would be a great improvement in the legislation concerning exemption, if no church, school, college, asylum, or hospital could claim exemption unless it deposited with the proper State official every year an intelligible statement in print of its financial transactions and of the nature and condition of its property. The ground upon which any institution is exempted from taxation is that it is doing work of public utility. Now, there is no work of genuine public utility which will not be furthered by complete publicity; so that the State, by insisting on annual returns from exempted institutions, would

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[*] Class of	1877	subscribed	$5,035.	No. of subscribers,		92.
" "	1878	"	1,630.	"	"	80.
" "	1879	"	3,425.	"	"	70.
" "	1880	"	2,620.	"	"	57.
" "	1881	"	855.	"	"	17.

do nothing but good to institutions which ought to be exempted.

The usual information concerning the number of students, and the honors, prizes, and degrees given in 1880–81, together with a list of the examining committees appointed for that year by the Board of Overseers, will be found in the Appendix (V.–VIII.). The attention of the Overseers is respectfully invited to the following Reports from the Deans of the several Faculties, the Secretary of the Academic Council, the Librarian, the Directors of the Botanic Garden, Arnold Arboretum, and Observatory, and the Curator of the Museum of Comparative Zoölogy.

CHARLES W. ELIOT, *President.*

Cambridge, Jan. 4, 1882.

REPORTS

OF THE

DEANS OF THE FACULTIES, THE SECRETARY OF THE ACADEMIC COUNCIL, THE LIBRARIAN, THE DIRECTORS OF THE BOTANIC GARDEN, THE ARNOLD ARBORETUM, AND THE OBSERVATORY, AND THE CURATOR OF THE MUSEUM OF COMPARATIVE ZOÖLOGY.

To the President of the University:

Sir, — As Dean of the College Faculty, I have the honor to present the following report upon the administration of Harvard College during the academic year 1880–81.

The number of undergraduates at the beginning of the year was eight hundred and twenty-nine. The changes of all kinds in the composition of the College classes, from October, 1880, to October, 1881, were as follows: —

Present Oct., 1880.	Left the Class.	Admitted Oct., 1881.	Present Oct., 1881.
Seniors . . . 196	Class Graduated.	. .	. .
Juniors . . . 186	12	8	Seniors . . . 182
Sophomores . . 204	14	17	Juniors . . . 207
Freshmen . . . 243	38	12	Sophomores . . 217
829		New Class.	Freshmen . . . 217
			823

Of the whole number of students set down as having left their classes, twenty-nine either withdrew or were removed from College, or were dropped to some lower class, in consequence of an unprofitable use of their time; eight students withdrew by reason of ill-health; and four were advanced to higher classes at the end of the year, under exceptional circumstances. Two deaths occurred, one by drowning in the Christmas recess, and the other by typhoid fever near the end of the last summer vacation.

The tables given on pages 46–51 show the names of the instructors in charge of the various courses of study, the number of students in attendance upon each at the beginning of May, the number of sections in each course, and the number of hours of attendance per week, both for student and instructor. The table does not include the courses established for graduates, as these courses are under the supervision of the Academic Council and not of the College Faculty. The table also fails to include many cases where courses are pursued by students as extra studies, and with a degree of regularity which deserves notice, although no responsibility exists for the performance of the work.

Instruction was given in Elocution to seventy-seven Seniors, sixty-five Juniors, and fifty-two Sophomores by Mr. Riddle and Mr. Ticknor, and to seventy-five Freshmen by Mr. Sargent. One exercise with the instructor for fifteen minutes was given weekly to each of the Seniors and Juniors; the Sophomores met the instructors in four sections, having weekly exercises of one hour, and the same method was pursued with the Freshmen. The attendance of all these students was entirely voluntary and only the necessary limit of the time of the instructors prevented a larger number from availing themselves of the instruction.

At the close of the last year the Faculty were required to enforce, for the first time, the regulation whereby no student found to be deficient in studies amounting to more than seven hours of recitation per week can be advanced to the next higher class. Under this regulation three of the Juniors of 1880–81 failed to become Seniors and are still Juniors; four Sophomores failed in like manner, and eleven Freshmen. To these must be added seven Freshmen who were required to leave College before the end of the year in consequence of incorrigible neglect on their part. The number of students thus removed from their classes for deficient scholarship, for the last eight years, is as follows: —

	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.
Removed to lower classes . .	13	19	28	17	25	14	22	18
Withdrawn during the year .	10	13	8	16	4	11	4	7
Total	23	32	36	33	29	25	26	25
Whole number of students.	706	716	776	823	818	819	813	829

PRESCRIBED STUDIES.

Instructors.	Subjects.	Text-Books.	No. of Students.	No. of Sections.	Hours per week for Students.	Hours per week for Instructors.
		FRESHMEN.				
Prof. Goodwin and Messrs. Dyer, L. B. R. Briggs, Wheeler, and Phillips	Greek	[*Maximum Sections.*] — Lysias (Five Orations). — Plato (Apology and Crito). — Homer (Odyssey, Books I.-XII. or Iliad, Selections, as preferred).—Sidgwick's Greek Prose Composition, Part I. — Translation at Sight. — Lectures on Greek Literature. — Goodwin's Greek Moods and Tenses	75	6	3	18
		[*Advanced Sections.*] — In addition to the above, Aristophanes (The Clouds)	105	2	3	6
		[*Minimum Section.*] — Herodotus and Thucydides (Selections in Goodwin's Greek Reader). — Homer (Iliad, Books IV.-IX.). — Translation at sight. — Composition. — Goodwin's Greek Moods and Tenses. — Selections from Grote's History of Greece	89	1	3	3
Prof. Lane and Messrs Gould, Wheeler, and Phillips	Latin	[*Maximum Sections.*] — Livy (Books XXI.-XXII.). — Horace (Odes and Epodes) — Cicero (Walford's Extracts, Part I. in connection with Composition). — Translation at sight. — Latin Prose Composition. — Selections from Mommsen's History of Rome	88	6	3	18
		[*Advanced Sections.*] — In addition to the above, the Mostellaria of Plautus	115	2	3	6
		[*Minimum Section.*] — The same authors as above, but in smaller quantities. — Translation at sight. — Latin Prose Composition	15, 1 Sc.	1	3	3
Messrs. Sheldon and Lutz	German	Sheldon's Grammar. — Translation from German into English and English into German	173	8	3	24
Prof. Jacquinot	French	Brachet (Petite Grammaire Française). — Bôcher's Reader. — A. Achard (Le Clos Pommier). — Feuillet (Roman d'un jeune homme pauvre)	24, 3 Sc.	1	3	3
Profs. C. J. White and Byerly, and Mr. G. R. Briggs	Mathematics	[*Maximum Section.*] Algebra (Todhunter, chapters I. — XXXVI., XLVI., LIII.). — Analytic Geometry (Lectures)	34, 5 So.	1	7 in two weeks.	7 in two weeks.
		[*Minimum Sections.*] — Algebra (as above). — Chauvenet's Solid Geometry. — Wheeler's Plane Trigonometry. — Analytic Geometry (Lectures)	188	8	7 in two weeks.	28
Mr. Willson and Mr. N. D. C. Hodges	Physics	[*Maximum Section.*] — Tait's Recent Advances in Physical Science. — Maxwell's Theory of Heat, omitting chapters X.-XVIII. inclusive	34	1	2	2
		[*Minimum Sections.*] — Ganot's Physics, Books I.-IV., and Book VII., chapters I.-VI.	184	6	2	12
Prof. Cooke	Chemistry	Elementary Chemistry (Twenty Lectures)	211	1	1 after Christmas.	1 after Christmas.
		SOPHOMORES.				
Messrs. Drennan and Wendell	Rhetoric	Hill's Principles of Rhetoric. — Exercises in Writing and Criticism	182, 5 Fr.	4	2	8
Messrs. Drennan, Perry, and Wendell	Themes	Six Themes, corrected and rewritten	203			

JUNIORS.

Prof. A. S. Hill and Mr. Perry	Themes	Six Themes, corrected and rewritten	180			
Dr. Snow	Forensics	Four Forensics Theses substituted for Forensics, as allowed by the rules, by	150 15			

SENIORS.

Prof. Peabody	Forensics	Four Forensics Written work substituted for one or more Forensics, as allowed by the rules, by	141 56			

ELECTIVE STUDIES.

Instructors.	Courses.	Subjects and Text-Books.	No. of Students.	No. of Sections.	Hours per week for Students.	Hours per week for Instructors.
Prof. Toy	Hebrew	Hebrew Inflections. — Davidson's Grammar. — Reading from the Hebrew Bible	5 Di.	1	3	3
Prof. Lanman	Sanskrit	Elementary Course. — Whitney's Grammar. — Lanman's Reader	1 Se., 3 Ju., 1 Gr.	1	3	3
Prof. Greenough	Classics 1	Introduction to Comparative Philology. — Lectures	1 Se., 1 Ju., 10 So.	1	1	1
Prof. Greenough	Classics 2	Greek and Latin Comparative Philology. — Curtius's Grundzüge der Griechischen Etymologie. — Lectures	2 Se., 1 Ju., 2 So., 1 Gr.	1	2	2
Dr. Wheeler	Greek 1	Herodotus (Book I.). — Sophocles (Oedipus Tyrannus). — Aeschylus (Prometheus)	1 Se., 1 Ju., 24 So., 1 Fr.	1	2	2
Prof. J. W. White	Greek 2	Thucydides (Books VI., VII.). — Aristophanes (Clouds). — Homer (Iliad XVIII.)	3 Se., 3 Ju., 46 So., 1 Di.	2	2	4
Prof. J. W. White	Greek 3	Herodotus. — Practice in reading at sight	3 Se., 4 Ju., 43 So., 4 Fr.	2	2	4
Mr. Dyer	Greek 4	Composition (First Course).— Sidgwick's Greek Prose Composition (Part II.). — Reid's Selections	1 Se., 1 Ju., 35 So., 3 Fr., 1 Un.	2	1	2
Prof. J. W. White	Greek 5	Composition (Second Course). — Sidgwick's Greek Prose Composition (Part III.)	10 Ju., 1 So.	1	1	1
Prof. J. W. White	Greek 6	Composition (Third Course). — Sidgwick's Greek Prose Composition (Part IV.)	10 Se., 1 Ju., 1 Gr.	1	1	1
Prof. Goodwin	Greek 7	Demosthenes (de Falsa Legatione and de Corona). — Aeschines (in Ctesiphontem). — Thucydides (Book I. and II.)	2 Se., 3 Ju.	1	3	3
Prof. Goodwin	Greek 8	Plato (Protagoras and Republic). — Aristotle (Ethics, Books I.–III. and X.)	17 Se., 3 Ju., 2 Gr.	1	3	3
Prof. Goodwin	Greek 9	Aeschylus (Persae and Agamemnon). — Sophocles (Electra and Antigone). — Aristophanes (Frogs)	13 Se., 14 Ju., 2 Gr.	1	3	3
Prof. Sophocles	Greek 10	Arrian (Anabasis). — Polybius (Book III.)	4 So., 1 Fr.	1	2	2
Prof. Smith	Latin 1	Terence (Phormio, Heautontimoroumenos and parts of Andria). — Cicero (Letters). — Horace (Satires and Epistles). — Tacitus (Agricola). — Translation at sight	3 Se., 32 So., 3 Fr.	1	3	3

ELECTIVE STUDIES. — CONTINUED.

Prof. Greenough	Latin 2	Terence (Phormio and Adelphi). — Cicero (Pro Muraena). — Horace (Satires)	1 Ju., 59 So., 1 Fr.	2	2	4
Prof. Smith	Latin 3	Composition (First Course) — Caesar (Gallic War, Book IV.) with colloquial exercises. — Bennett's Second Latin Writer	1 Se., 2 Ju., 34 So.	1	1	1
Prof. Smith	Latin 4	Latin Poetical Literature. — Lectures on Latin Poetry. — Readings from Thackeray's Anthology	5 Se., 4 Ju.	1	2	2
Prof. Lane	Latin 5	Pliny (Epistles). — Tacitus (Dialogue and Histories)	3 Se., 34 Ju., 9 So.	1	3	3
Prof. Smith	Latin 6	Composition (Second Course). — Nixon's Parallel Extracts. — Potts's Exercises. — Potts's Hints towards Latin Prose Composition	2 Se., 5 Ju., 4 So.	1	1	1
Prof. Lane	Latin 7	Cicero (De Natura Deorum). — Plautus (Mostellaria). — Lucretius	22 Se., 7 Ju., 1 Gr.	1	3	3
Prof. Lane	Latin 8	Composition (Third Course). — Translations, chiefly from Niebuhr's History	6 Se.	1	1	1
Prof. Child	English 1	Chaucer's Canterbury Tales. — Bacon's Essays. — Select Poems from Milton and Dryden	14 Se., 9 Ju., 17 So.	1	3	3
Prof. Child	English 2	Shakspere (Nine Plays)	13 Se., 20 Ju., 18 So., 1 Sc.	1	3	3
Prof Child	English 3	Anglo-Saxon. — Sweet's Anglo-Saxon Reader	1 Se., 4 Ju., 1 So.	1	2	2
Prof. Child	English 4	Early English. — Mätzner's Altenglische Sprachproben	Omitted in 1880-81		2	
Prof. A. S Hill	English 5	Rhetoric and Themes (Advanced Course)	11 Se., 4 Ju., 2 Gr.	1	3	3
Prof. A. S. Hill	English 6	Oral discussion	17 Se.	1	3 in two weeks	3 in two weeks.
Prof. A. S. Hill	English 7	English Literature, from Dryden to Wordsworth	10 Se., 9 Ju., 8 So., 3 Fr.	1	1	1
Prof. W. Cook	German 1	Stoll's Altrömische Leben. — Freytag's Journalisten. — Lindau's Tod der Frau Baronin	1 Se., 2 Ju., 43 So., 4 Fr.	2	3	6
Prof. Bartlett	German 2	Der Neue Plutarch (vols. III., VII.). — Selections from German Lyrics	1 Se., 2 Ju., 75 So.	2	3	6
Mr. H. B. Hodges	German 3	Hodges's Course in Scientific German. — Helmholtz's Populäre Wissenschaftliche Vorträge	10 Se., 6 Ju., 9 So., 1 Fr., 2 Sc.	1	2	2
Prof. W. Cook	German 4	Composition and Grammar	1 Ju., 5 So.	1	1	1
Prof. Bartlett	German 5	German Literature of the XIX. Century. — Selections from Körner, Uhland, Grillparzer, Heine	24 Ju., 8 So., 2 Fr.	1	3	3
Prof. W. Cook	German 6	Vanhagen von Ense's Graf Wilhelm zur Lippe. — Goethe's Faust. — Schiller's Jungfrau von Orleans	7 Se., 43 Ju., 4 So., 1 Fr.	2	3	6
Prof. Bartlett	German 7	Dramatic works of Goethe, Schiller, and Lessing. — Literary Histories of Hettner, Kurz, and Koberstein	14 Se., 3 Ju., 1 So.	1	3	3
Prof. Hedge	German 8	Kluge's Geschichte der Deutschen Literatur. — Goethe's Faust and Aus meinem Leben. — Jean Paul's Flegeljahre. — Lectures	5 Se., 1 So.	1	1	1
Prof. Jacquinot	French 1	Brachet's Petite Grammaire Française, 2me Partie. — A. de Musset (Le Merle Blanc). — About (Les Mariages de Paris). — J. Sandeau (Sacs et Parchemins). — C. Labiche (Les Petits Oiseaux)	11 Ju., 41 So., 4. Fr., 4 Law, 4 Sc.	2	3	6
Prof. Bôcher	French 2	La Fontaine (Fables). — Racine (Andromaque, Athalie, Esther). — Taine (La Fontaine et ses Fables)	3 Se., 10 Ju., 33 So., 2 Fr., 1 Sc.	1	3	3
Prof. Bôcher	French 3	Molière. — Corneille (Le Cid). — Montaigne (Essais). — Paul Albert (Littérature Française jusqu'au XVIIme Siècle)	3 Se., 15 Ju., 7 So., 2 Fr., 1 Un., 1 Law, 2 Sc.	1	3	3
Prof. Jacquinot	French 4	Paul Albert (Littérature Francaise au XVIIme Siècle). — V. Cousin (La Jeunesse de Mad. de Longueville). — Molière (Tartuffe). — Corneille (Le Cid). — La Rochefoucauld (Maximes). — La Bruyère (Caractères). — St. Simon (Louis XIV. et sa Cour). — Themes. — Lectures	4 Se., 3 Ju., 3 So., 2 Fr., 1 Gr., 1 Sc.	1	3	3

Mr. Bendelari	French 5	Thiers (Histoire de la Révolution Française)	9 Se., 6 Ju., 6 So.	1	2	2
Mr. Bendelari	Italian 1	Toscani's Grammar. — De Amicis (La Vita Militare). — Manzoni (I Promessi Sposi). — Silvio Pellico (Le Mie Prigioni). — Goldoni (Il Bugiardo)	20 Se., 25 Ju., 14 So., 1 Fr.	1	3	3
Prof. Nash	Italian 2	Giacosa (Acquazzoni in Montagna). — Manzoni (I Promessi Sposi). — Gherardi del Testa (L' oro e l' orpello; Pilade e Oreste). — Bersezio (I Mettunale). — Tasso (Gerusalemme Liberata)	9 Se., 4 Ju., 1 Un.	1	3	3
Prof. Nash	Italian 3	Boccaccio (Decamerone). — Petrarca (Rime). — Dante (Divina Comedia). — S. Pellico (Francesca da Rimini)	9 Se.	1	3	3
Mr. Bendelari	Spanish 1	Josse's Grammar. — Gil Blas. — El Eco de Madrid. — Lamartine's Life of Mary Stuart	12 Se., 4 Ju., 10 So., 1 Fr. 1 Un.	1	3	3
Prof. Nash	Spanish 2	Don Quixote. — Hartzenbusch (Juan de las Viñas). — L. F. de Moratin. — Br. de los Herreros. — Martinez de la Rosa	9 Se., 1 Ju., 1 So., 1 Fr., 1 Un.	1	3	3
Prof. Nash	Spanish 3	Calderon. — Martinez de la Rosa. — Lope de Vega. — Cadalso	4 Se.	1	3	3
Prof. Bowen	Philosophy 1	Logic and Psychology. — Bowen's Logic. — Mill's Examination of Hamilton's Philosophy	1 Se., 11 Ju., 16 So.	1	2	2
Prof. Palmer	Philosophy 2	Logic and Metaphysics. — Jevon's Logic. — Ferrier's Lectures on Greek Philosophy	2 Se., 9 Ju., 35 So., 2 Sc.	1	2	2
Prof. James	Philosophy 3	Philosophy of Evolution. — Spencer's First Principles. — Spencer's Data of Ethics	7 Se., 7 Ju., 5 So., 2 Di.	1	2	2
Prof. Peabody	Philosophy 4	Ethics. — Peabody's Moral Philosophy. — Plutarch (De Sera Numinis Vindicta). — Cicero (De Officiis)	67 Se., 55 Ju., 24 So., 9 Fr., 1 Un.	1	3	3
Prof. James	Philosophy 5	Psychology. — Bain's Mental Science	20 Se., 3 Ju., 1 So., 1 Di.	1	3	3
Prof. Palmer	Philosophy 6	English Philosophy. — Locke's Essay on Human Understanding. — Fraser's Selections from Berkeley. — Hume's Essays	18 Se., 10 Ju., 2 So., 1 Sc.	1	3	3
Prof. Bowen	Philosophy 7	Early French and German Philosophy. — Bouillier (Histoire de la Philosophie Cartésienne). — Kant (Critique of Pure Reason). — Bowen's Modern Philosophy	17 Se., 3 Ju.	1	3	3
Prof. Bowen	Philosophy 8	German Philosophy of the Present Day. — Schopenhauer (Die Welt als Wille und Vorstellung). — Hartmann (Philosophie des Unbewussten)	7 Se.	1	3	3
Prof. Dunbar and Dr. Laughlin	Political Econ. 1	Elementary Course. — Mill's Principles of Political Economy. — Lectures	7 Se., 4 Ju., 9 So., 2 Un.	1	2	2
Prof. Dunbar and Dr. Laughlin	Political Econ. 2	Full Course. — Mill's Principles of Political Economy. — Lectures on Currency and the Financial Legislation of the United States	13 Se., 73 Ju., 13 So., 1 Sc.	2	3	6
Prof. Dunbar	Political Econ. 3	Advanced Course. — Cairnes's Leading Principles of Political Economy. — Giffen's Essays in Finance. — Lectures	3 Se., 2 Ju., 1 Gr., 1 Law	1	3	3
Dr. Emerton	History 1	Introductory Course in Mediaeval and Modern History (Germany, Italy, and Spain). — Lewis's History of Germany. — Hunt's History of Italy	1 Se., 3 Ju., 24 So., 1 Fr., 2 Un.	1	2	2
Mr. Macvane	History 2	Introductory Course in Mediaeval and Modern History (France and England). — The Student's Hume. — The Student's History of France	1 Se., 14 Ju., 59 So., 5 Fr., 2 Un.	1	2	2
Mr. Macvane	History 3	Introductory Course in the Constitutional Government of England and the United States	1 Se., 3 Ju., 32 So., 1 Fr., 1 Un.	1	2	2
Prof. Gurney	History 4	Later Roman and Early Mediaeval History. — Merivale's History of the Romans under the Empire. — Gibbon's Decline and Fall of the Roman Empire. — Arnold's Roman Provincial Administration	5 Se., 9 Ju., 1 So.	1	3	3
Dr. Emerton	History 5	The General History of Europe from the beginning of the Ninth to the end of the Thirteenth Century. — Lectures and Theses	3 Se., 15 Ju., 2 So.	1	3	3

ELECTIVE STUDIES. — CONTINUED.

Dr. Emerton	History 6	The Revival of Learning and the Reformation (1300–1550)	Omitted in 1880–81		3	
Dr. Young	History 7	History of England to the Seventeenth Century (Constitutional and Legal). — Stubbs's Select Charters	16 Se., 11 Ju., 4 So.	1	3	3
	History 8	Constitutional and Political History of the United States to the year 1836	Omitted in 1880–81			
Mr. Hoague; Dr. Snow for the second half-year	History 9	Constitutional and Political History of the United States from the year 1836 to 1860	66 Se., 51 Ju., 1 So.	1	3	3
Mr. Macvane	History 10	European History during the Seventeenth Century and the first half of the Eighteenth. — Hallam's Constitutional History of England	54 Se., 84 Ju., 1 So.	1	3	3
	History 11	European History from the Middle of the Eighteenth Century	Omitted in 1880–81		3	
Dr. Young	Roman Law	Institutes of Gaius and Justinian. — Gneist's Syntagma	5 Se., 1 Ju., 1 Gr.	1	3	3
Mr. Moore	Fine Arts 1	Principles of Design in Painting, Sculpture, and Architecture. — Ruskin's works. — Sir Joshua Reynolds's Discourses	14 Se., 9 Ju., 6 So., 1 Gr., 2 Di., 5 Sc.	1	3	3
Prof. Norton	Fine Arts 2	Ancient Art	Omitted in 1880–81		3	
Prof. Norton	Fine Arts 3	Art from the Fall of the Roman Empire to the year 1600. — Burckhardt's Civilization of the Renaissance in Italy. — Lectures	28 Se., 7 Ju., 1 Fr.	1	1	1
Prof. Norton	Fine Arts 4	Greek Art. — Lectures	25 Se., 12 Ju., 2 So., 1 Fr.	1	2	2
Prof. Norton	Fine Arts 5	Romanesque and Gothic Art, from the year 1000 to 1350	Omitted in 1880–81		3	
Prof. Paine	Music 1	Harmony. — Richter's Harmony	2 Se., 1 Ju., 6 So., 2 Fr., 1 Un.	1	2	2
Prof. Paine	Music 2	Counterpoint. — Richter's Counterpoint	2 Se., 7 Ju.	1	3	3
Prof. Paine	Music 3	History of Music. — Lectures	14 Se., 7 Ju., 1 So.	1	3	3
Prof. Paine	Music 4	The Instrumental Music of Haydn, Mozart, Beethoven, and their successors	2 Se., 1 Ju.	1	1	1
Prof. C. J. White	Mathematics 1	Practical Applications of Trigonometry, Plane and Spherical. — Wheeler's Trigonometry. — Problems. — American Ephemeris	1 Ju., 12 So., 1 Fr.	1	2	2
Prof. Byerly	Mathematics 2	Differential and Integral Calculus (First Course). — Byerly's Differential Calculus. — Lectures	1 Se., 2 Ju., 29 So., 1 Gr.	1	2	2
Prof. Byerly	Mathematics 3	Theory of Equations. — Todhunter's Theory of Equations. — Lectures	1 Ju., 18 So., 1 Fr., 1 Gr.	1	1	1
Prof. Peirce	Mathematics 4	Analytic Geometry (for students who had taken the Advanced Freshman Course in Mathematics). — Salmon's Conic Sections	1 Ju., 12 So.	1	3	3
Prof. Peirce	Mathematics 5	Differential and Integral Calculus (Second Course). — Williamson's Differential Calculus. — Williamson's Integral Calculus. — Todhunter's Integral Calculus. — Boole's Differential Equations	9 Ju., 1 Gr.	1	3	3
Prof. Peirce	Mathematics 6	Quaternions (First Course). — Hamilton's Elements of Quaternions. — Tait's Quaternions	1 Se., 5 Ju., 1 Gr., 1 Sc.	1	3	3

Prof. Eustis	Mathematics 7	Descriptive Geometry and Perspective. — Church's Descriptive Geometry	2 Se., 1 So., 1 Sc.	1	3	
Prof. Byerly	Mathematics 8	Differential Equations. — Boole's Differential Equations. — Lectures	3 Se., 1 Ju., 1 Gr., 1 Sc.	1	3	3
Prof. Peirce	Mathematics 9	Analytic Mechanics (Second Course). — Routh's Rigid Dynamics. — Peirce's Analytic Mechanics	3 Se.	1	3	3
Prof. Lovering	Physics 1	Astronomy, Optics, and Acoustics. — Herschel's Outlines of Astronomy. — Deschanel's Treatise on Acoustics and Optics	2 Se., 3 Ju., 10 So., 1 Law	1	3	3
Prof. Trowbridge	Physics 2	Practical Exercises in the Laboratory, including the use of Instruments of Precision	6 Se., 9 Ju., 15 So., 1 Sc.	1	3	3
Prof. Trowbridge	Physics 3	The Conservation of Energy. — Lectures	5 Se., 7 Ju., 5 So.	1	2	2
Prof. Lovering	Physics 4	Electricity and Magnetism. — Undulatory Theory of Light. — Deschanel's Electricity and Magnetism. — Lloyd's Undulatory Theory of Light	2 Se., 1 Ju., 1 Sc.	1	3	3
Prof. Gibbs	Physics 5	The Spectroscope and its Applications. — Thermodynamics and Thermics, including the Applications of Heat. — Lectures	2 Se., 1 Sc.	1	3	3
Prof. Jackson	Chemistry 1	Descriptive Chemistry. — Lectures and Laboratory work	4 Se., 5 Ju., 55 So., 3 Fr.	2	3	6
Prof. Cooke and Mr. Melville	Chemistry 2	Determinative Mineralogy and Lithology. — Dana's Text-book of Mineralogy. — Study in the Mineral Cabinet	12 Se., 11 Ju., 10 So., 1 Un., 4 Sc.	1	3	3
Prof. H. B. Hill	Chemistry 3	Qualitative Analysis. — Hill's Lecture Notes. — Laboratory work	13 Se., 27 Ju., 1 So., 6 Sc.	1	3	3
Prof. Cooke and Mr. Kinnicutt	Chemistry 4	Quantitative Analysis. — Laboratory Work	14 Se., 7 Ju., 1 Un.	1	3	3
Prof. H. B. Hill	Chemistry 5	The Carbon Compounds. — Fittig (Grundriss der organischen Chemie). — Lectures and Laboratory work	10 Se., 1 Sc.	1	3	3
Prof. Cooke	Chemistry 6	Advanced Course in Experimental Chemistry. — Laboratory work	2 Se., 1 Ju.	1	3	3
Prof. Cooke	Chemistry 7	Crystallography and the Physics of Crystals. — Study in the Mineral Cabinet	Omitted in 1880–81		3	
Mr. Davis	Natural Hist. 1	Physical Geography and Meteorology. — Buchan's Introductory Text-book of Meteorology	7 Se., 1 Ju., 2 So., 3 Sc.	1	3	3
Dr. Mark	Natural Hist. 2	Zoölogy. — Lectures	25 Se., 15 Ju., 22 So., 1 Fr., 1 Un., 3 Gr., 1 Di., 7 Sc.	1	2	2
Prof. Goodale	Natural Hist. 3	Botany. — Gray's Structural Botany. — Lectures and Laboratory work	34 Se., 27 Ju., 16 So., 1 Fr., 4 Un., 1 Gr., 1 Di., 1 Sc.	1	3	3
Prof. Shaler	Natural Hist. 4	Geology. — Dana's Text-book of Geology. — Lectures	56 Se., 36 Ju., 39 So., 5 Fr., 12 Sc., 2 Di., 2 Gr.	1	3	3
Prof. Farlow and Dr. Faxon	Natural Hist. 5	Biology. — Morphology, Histology, and Development of Plants and Animals. — Lectures and Laboratory work	16 Se., 11 Ju., 4 So., 7 Sc.	1	3	3
Dr. Faxon	Natural Hist. 6	Advanced Zoölogy. — Lectures and Laboratory work	7 Se., 1 So., 1 Gr., 2 Sc.	1	3	3
Prof. Goodale and Prof. Farlow	Natural Hist. 7	Advanced Botany. — Lectures and Laboratory work	5 Se., 3 Ju., 1 So.	1	3	3
Prof. Shaler and Mr. Davis	Natural Hist. 8	Advanced Geology. — Lectures	12 Se., 9 Ju., 1 So.	1	3	3

Of the twenty-five for 1881, sixteen are now in College pursuing their studies for the degree, and in several cases under the stimulus of a well-grounded hope of ultimate restoration to their original classes. In three cases at the end of the last year the Faculty, in conformity with the spirit of the present regulation, restored students who had been dropped from their classes in some former year, their deficiencies being either made up or satisfactorily reduced, and evidence of substantial improvement being given; and there is reason to believe that these examples are now exerting a salutary influence upon students at present suffering under the same penalty.

Of the Seniors presenting themselves for the degree of Bachelor of Arts, thirteen failed to receive the degree. Two of them were deficient in studies of the Senior year alone, seven others in studies of more than one year, and four were so heavily in arrears that their names were finally withdrawn. For the past seven years the number of Seniors failing to obtain the degree by reason of failure in scholarship has been as follows: —

	1875.	1876.	1877.	1878.	1879.	1880.	1881.
Passed in all their work . . .	183	135	170	144	189	162	182
Failed, but can make up . .	11	6	17	11	5	6	9
Failed, and must repeat the year	2	3	2	4	..	..	..

Few cases of discipline occurred during the year, and in only two of them did the Faculty find it necessary to inflict the penalty of suspension. In one instance a grave offence against good order was punished by suspension for four months, and in the other dishonesty at an examination led to a like sentence. This greatly diminished use of the only effective penalty at the command of the Faculty is in considerable part due to a change of system which has swept away many offences once enumerated in the regulations; but it is also in part due to a substantial improvement in the general tone of the College, which has made cases of disorder less frequent. There can be no question that the mass of the students have responded with proper feeling to the efforts made by the Faculty to preserve good order by a better public sentiment rather than by surveillance and a code, and that a gain has been made not merely in the outward observance of decorum, but in character and the ability for self-control. That much still remains to be done in the way of improvement, nobody can doubt who considers the conditions under which eight hundred young men are gathered together in Cambridge; but what has already been gained is the complete justification of the liberal policy pursued by the Faculty, and the best encouragement for its continuance.

The examination for admission to the Freshman class in 1881 was conducted wholly upon the requirements under the new method, first used at the examination in 1878. The number of candidates presented was two hundred and fifty-three, and the results as compared with those in previous years under the same method were as follows: —

1878. 133 Candidates. 1879. 179 Candidates. 1880. 236 Candidates. 1881. 253 Candidates.	MINIMUM REQUIREMENTS.										
	Caesar and Virgil.	Latin at Sight and Comp.	Xenophon or Reader.	Greek Sentences.	Ancient History and Geography.	Arithmetic.	Algebra.	Plane Geometry.	Minimum Physics.	English Composition.	French or German.
Percentage failing in each study.											
1878	14	7.5	29	18	20	13	31.5	43	14	19	36
1879	8	11	20	23	18	14.5	28.5	37	19	28.5	21
1880	14	6	17	17	15	14	29	36	11	17	13
1881	8	6	12	18	15	14	25	27	7	10	18

	MAXIMUM REQUIREMENTS.								
	Cicero and Virgil.	Latin at Sight and Comp.	Herodotus.	Greek Comp.	Iliad.	Trigonometry.	Solid Geometry.	Maximum Physics.	Chem. or Botany.
Percentage failing in each study.									
1878	7	15	17.5	36	21	29	65	38	57
1879	16	28	22	33	13	32.5	60	48	24
1880	14	22	12	33	14	39	48	18	9
1881	15	18	12	19	12	80	41	16	27

The following are the general results of the examination as regards the admission or the rejection of candidates: —

Candidates offered	253
" admitted	231
" " clear . .	99
" rejected	22

The combinations of maximum subjects offered by the candidates examined exhibit no material change, as may be seen from the following comparative statements: —

Candidates under Method I.	1878.	1879.	1880.	1881.
[Required to offer the maximum in at least *two* subjects.]				
Offered Maximum in				
Latin, Greek, Mathematics, and Physics .	2	3	2	4
Latin, Greek, and Mathematics.	4	8	15	14
Latin, Greek, and Physics	2	3	7	5
Latin, Mathematics, and Physics	2	..	2	1
Greek, Mathematics, and Physics	..	1	..	1
Latin and Greek	104	109	159	177
Latin and Mathematics.	8	14	17	13
Latin and Physics	9	23	20	25
Greek and Mathematics	1	2	..	2
Greek and Physics	1	1	4	..
Mathematics and Physics	5	15	10	11
Total number of candidates	138	179	236	253

The success of candidates who offered themselves in 1881 for a preliminary examination on a part of the subjects required for admission, and propose to complete their work in some future year, is shown by a statement giving the number of subjects in which such candidates passed: —

Preliminary Examination.	Candidates.	In Five Subjects.	In Six Subjects.	In Seven Subjects.	In Eight Subjects.	In Nine Subjects.	In Ten Subjects.	In Eleven Subjects.	In Twelve Subjects.	In Thirteen Subjects.	Failed to pass in Five Subjects.
Method I.											
1878	133	16	20	12	15	18	6	..	..	..	46
1879	215	38	29	23	29	13	10	3	..	..	70
1880	214	30	24	31	33	22	10	..	..	..	64
1881	266	38	30	46	65	17	19	5	..	..	46
Method II.											
1878	108	20	20	6	8	6	6	3	1	2	36
1879	30	5	4	1	2	6	3	1	1	..	7
1880	4	2	1	..	1	..	..	..	..	..	..

The proportion of candidates examined in each subject under the new method, and the proportion who failed in each, are as follows: —

Preliminary Examinat'n. 1878, 133 Candidates. 1879, 215 „ 1880, 214 „ 1881, 266 „	Caesar and Virgil.	Latin at Sight.	Xenophon or Greek Reader.	Greek Sentences.	Ancient History and Geography.	Arithmetic.	Algebra.	Geometry.	Physics.	English.	French.	German.
Percentage of the whole number of candidates who were examined in each study.												
1878	95	86	69	71	78	90	71	29	71	82	60	6
1879	89	86	74	80	77	96	93	55	55	69	56	7
1880	92	88	78	76	84	97	7	46	61	58	64	5
1881	88	86	78	79	76	97	82	46	74	61	54	5
Percentage of failure among those examined in each study.												
1878	33	28	30	47	40	14	38	72	20	34	26	50
1879	24	25	33	44	23	26	52	78	15	53	13	14
1880	25	25	25	26	39	22	50	61	7	34	21	30
1881	15	19	28	24	22	21	35	41	17	19	17	14

A few changes of some importance were made in the courses of study at the close of the year. In place of the course in Greek and Latin Comparative Philology, a course for practice in speaking and writing Latin was established, to be carried on by the use of the language in the class-room in the critical study of an author, and to be conducted by Professor Greenough; and an additional course in Latin Prose Literature, for the purpose of rapid reading in the Latin authors, was also established, to be conducted by the same instructor. The courses in German were recast, in order to secure greater consecutiveness of work, and at the same time to give the student his choice between methods of instruction. In Philosophy the elementary course hitherto given by Professor Bowen was withdrawn by him, with the approval of the Faculty, in order that the whole of his valuable services might be devoted to advanced instruction. The course in Ethics heretofore given by Professor Peabody was discontinued in consequence of his retirement, and a new course in Ethics, adapted for students who have already made some progress in Philosophy, was established under Professor Palmer, the course heretofore given in the English Philosophy being suspended. Professor James's course in the Philosophy of Evolution was discontinued, and a course in Psychology established in its place. The first or partial course in Political Economy was discontinued, it being found that the great majority of students prefer a fuller treatment of the subject. The illness of Mr. Hoague had caused the transfer of his courses in American Constitutional and Political History to Dr. Snow, and at the close of the year it was found expedient to consolidate the two courses into one, covering the whole period to 1850. And, finally, in the Fine Arts two consecutive courses of two hours each were established in place of the single course in the Principles of Design previously given by Mr. Moore.

In this connection it is proper to record that during the last year the senior instructors in both Greek and Latin undertook a part of the work of instruction of the Freshman class. Heretofore these officers have carried on elective studies only; but it being believed by their associates that greater efficiency and spirit might be given to the work of the Freshman year if the professors of the classical departments were brought into contact with the class, Professor Goodwin read with the Freshmen the Clouds of Aristophanes, and Professor Lane the Mostellaria of Plautus. The results were so promising that the experiment is to be repeated in the present year, and is also to be tried in some other parts of the prescribed work of the College course.

The range of the elective studies open to students has been considerably extended in the last five years, chiefly by the addition of higher courses primarily established for graduates. Admission to these courses has been freely given to undergraduates upon application, whenever ability to profit by the study has been shown; and it is probable that the resort to them will be further encouraged by the removal of such distinction as now exists between graduate and undergraduate courses. Counting the graduate courses, then, with the other elective studies, and omitting the introductory courses in Philosophy, which correspond to the course in Logic and Metaphysics formerly prescribed for the Junior class, the number of hours of instruction per week from which the student makes his choice has risen from 262 in 1877-78 to 347 in 1881-82. In nearly every department the instruction offered has been enriched, in greater or less degree, by systematizing and consolidating the more elementary work and increasing the superior; but the most marked development has been the offering of a greatly increased body of instruction in the Semitic languages and Sanskrit, the establishment of courses in the classics fitted for advanced graduate study, and the remarkable extension of the advantages offered in Natural History. Comparatively few students in College, it may be said, are

EXERCISES PER WEEK IN ELECTIVE COURSES OFFERED.

Subjects.	1871-72	1872-73	1873-74	1874-75	1875-76	1876-77	1877-78	1878-79	1879-80	1880-81	1881-82
Hebrew	..	3	3	3	3	3	3	4	4	9	6
Arabic	..	..	..	..	..	..	..	..	..	2	2
Sanskrit and Zend	..	3	3	6	3	3	3	6	6	11	10
Classical Philology	..	..	..	..	3	3	2	2	3	3	8
Greek	24	25	22	23	25	23	23	24	26	29	25
Latin	10	15	15	15	19	20	18	22	18	22	26
English	6	8	8	5	8	11	14	15	16	16	16
German	9	8	8	11	14	17	19	24	25	22	23
French	14	14	14	18	12	15	15	15	15	14	18
Italian and Spanish	11	11	11	14	17	17	17	19	20	20	20
Philosophy	12	12	12	9	9	12	12	18	19	20	13
" Introductory	..	..	..	..	..	..	..	..	4	4	4
Ethics	3	3	3	3	3	3	3	3	3	3	3
Political Economy	3	3	3	6	6	6	6	6	9	9	7
Roman Law	..	3	..	3	3	3	3	3	4	4	5
History	15	17	17	20	20	23	23	25	19	24	29
" Introductory	..	..	..	..	..	..	..	..	6	6	6
Mathematics	21	24	20	24	20	23	24	28	30	26	26
Physics	12	12	12	14	15	15	17	22	21	19	19
Chemistry	11	11	14	14	14	18	18	21	26	26	23
Natural History	14	20	23	23	23	25	24	30	42	46	36
Music	3	5	8	11	14	11	12	13	13	15	14
Fine Arts	..	..	..	6	9	4	6	9	8	6	8
Aggregate	168	197	196	228	240	255	262	308	337	356	347

likely to enter upon the extensive fields thus thrown open to them. On this question of numbers it is much too early to pronounce an opinion; but all students in College, it is believed, feel the effect of a more stimulating intellectual atmosphere, created by the presence and example of persons engaged in the highest pursuits. Both as regards the intellectual activity of students and the quality of the instructing body, the vigorous life of the College hereafter is to be promoted most effectively by the building up of a broad and solid structure of University work.

Of the use actually made of the liberty of selection from this increasing variety of courses, enough has been said in former reports to show that in the great majority of cases studies are chosen systematically and consecutively, the actual disposition by the student of his three years of elective study generally disclosing some settled plan of work, suggested either by an original bent of mind or by his plans for the future. The effect produced by the elective system, however, on the studies themselves must continue to be the subject of careful observation. That some change should take place in the relative importance of studies which once held exclusive possession of the field, and are now compelled to share it with others, was inevitable. It was also to be expected that with the growth of the College in numbers, and the enlargement of its constituency, it should have a new class of students attracted by the opportunity of stepping aside from the traditional subjects. In order to exhibit the actual amount of change thus far produced by these and other influences, I now present a table, in continuation of one given in my report for 1876–77, showing the proportion of time given to the various elective studies by the classes electing them, for a series of years. The table was constructed by carefully tabulating the returns in every study and calculating from them the proportion, in which one thousand hours of attendance by students was in fact divided among the several departments, as the result of a free choice, from the year 1871–72 to the year 1881–82 inclusive.

It must be observed that the returns on which this table rests are those of the latter part of the year, except for 1881–82, the figures formerly given for 1877–78 having been revised for the sake of uniformity in this particular. It is also to be observed that the returns here used in Philosophy and History do not

PROPORTION OF 1000 HOURS TAKEN IN EACH STUDY.

Subjects.	1871–72	1872–73	1873–74	1874–75	1875–76	1876–77	1877–78	1878–79	1879–80	1880–81	1881–82
Hebrew, Sanskrit, and Philology	..	..	1	3	5	5	3	6	5	5	4
Greek	114	117	89	72	82	65	68	74	74	69	66
Latin	156	149	151	140	123	95	99	102	83	70	68
English	22	28	36	16	20	28	41	31	55	52	48
German	83	143	103	92	105	113	91	110	115	103	109
French	126	52	77	74	86	107	88	77	66	64	76
Italian and Spanish . .	28	22	26	38	47	57	49	57	48	52	47
Philosophy	16	30	42	59	53	56	57	49	30	41	28
Ethics	18	7	15	23	30	31	27	40	41	64	14
Political Economy . . .	56	45	45	74	75	55	62	64	56	51	76
Roman Law	..	11	..	9	13	12	8	4	8	3	12
History	102	132	126	135	116	118	110	74	105	114	146
Mathematics	60	51	65	45	34	27	34	36	33	32	36
Physics	75	36	46	31	30	8	29	15	24	26	37
Chemistry	52	78	58	53	49	71	67	64	65	74	84
Natural History	85	94	115	91	58	102	122	90	114	138	101
Music	7	5	5	10	13	10	9	16	24	18	13
Fine Arts	..	..	..	35	61	40	36	91	54	24	35
	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000

include the introductory courses which, since 1878–79, have taken the place of the work once prescribed in these departments. Examination of the figures given from year to year will disclose, moreover, some remarkable and apparently eccentric variations, easily explained by circumstances which are well known but not reducible to tabular statements. Thus, the fluctuation in the amount of time given to Ethics is due to the withdrawal of the popular course given for several years by Professor Peabody, and the substitution of an entirely different one under Professor Palmer, adapted, as has been said, only for students who have had some preliminary training. The temporary absence of instructors and the consequent suspension of their courses in some cases, and other similar personal considerations, account for some striking vicissitudes in History and in Natural History; while the varying attention given to the Fine Arts is due mainly to an unavoidable reduction in the amount of Professor Norton's instruction, not yet wholly made up. Apart from such annual fluctuations as these, it will be seen that the tendency for the last five years has been to diminish the proportion of time given to the ancient languages. There is reason to believe that the current year, with which the table ends, is exceptional both as regards the proportion of time used and the number of students pursuing classical studies, which, as was stated in my last report, shows little loss of ground; still, the tendency in the series of years is plainly marked, and is no doubt indicative of the changed requirements of the community. There has been effected at the same time a considerable improvement in the methods of instruction, so that the mass of students are carried to a point not reached by them a few years ago; but a certain degree of attainment being passed, the disposition to enter upon other studies must be said to have gained. Modern languages as a whole have maintained their ground, without great change; German holding, as heretofore, the leading place. Philosophy, History, and the related subjects have gained; the gain being made chiefly by History, however. Indeed, Philosophy has lost, unless we count with it the present course in Ethics, the character of which perhaps connects it more closely with Philosophy than with the course for which it is nominally the substitute. A part of the falling off for the present year is no doubt the consequence of the temporary suspension of the course in English Philosophy usually given by Professor Palmer, and the small number of the remaining courses, but it is also probable that the interest in the subject is not so widespread as it was a few years ago. There has been no loss in the quality of the students pursuing this study. History has gained heavily in the last three years, the gain being chiefly in the courses in modern and constitutional History. The proportion of time given to Mathematics, although small, is singularly constant. In Physics, Chemistry, and Natural History there has been on the whole some gain, with great fluctuations, however, from year to year, especially in Natural History, in which department the courses are especially sensitive to changes of instructors and to similar personal considerations. Music and the Fine Arts, taken together, cannot be said to have finally changed their position in any considerable degree.

On the whole, it does not appear that the tendency of the elective system has been to develop abnormally any particular class of studies. Some departments have fallen off and others have gained; but, on the whole, the general balance of the College studies has not greatly changed in the last five years. Any apprehension that may have been felt of a tendency to concentrate attention upon the easier class of subjects has failed to be justified, as well as the similar apprehension that severe pursuits, like that of the Mathematics, would disappear. It would be too much to expect that the relations of the several studies should undergo no further change. With the development of instruction, and with the constant revision and rearrangement of courses, which is the best safeguard against stagnation, the comparative attractions of departments will vary from year to year; the slowly changing wants of the community must also affect the resort to particular branches; but we may expect with some confidence, as the result of experience thus far, that under the system of free choice the great departments of study, linguistic, philosophical, historical, and scientific, will continue to divide the attention of students in a manner not far different from the present.

CHARLES F. DUNBAR, *Dean.*

To the President of the University:

Sir, — I have the honor to submit the following report on the condition of the Graduate Department of the University during the academic year 1880–81: —

The number of courses of instruction arranged with special reference to graduates was forty-four.

Twelve persons were admitted to candidacy for the degree of A.M.; and the whole number of candidates for that degree in any part of the year was fourteen, of whom five attained the degree, and four are still candidates.

Twelve persons were admitted to candidacy for the degree of Ph.D.; and the whole number of candidates for that degree in any part of the year was twenty-one, of whom two attained the degree of Ph.D., two received the degree of A.M., and fourteen (including one of those who took the degree of A.M.) are still candidates.

Two persons were admitted to candidacy for the degree of S.D.; and the whole number of candidates for that degree in any part of the year was five, of whom one attained the degree, and four are still candidates.

GRADUATE COURSES OF INSTRUCTION, 1880–81.

Instructors.	Departments.	Subjects.	Number of Students.	Exercises per week.
Prof. Toy	Semitic Languages	Advanced Hebrew and Aramaic. Hebrew Syntax. Gesenius's Grammar. Reading in the Targums and Daniel	8 Div.	2
Prof. Toy	Semitic Languages	Lectures on the History of Ancient Hebrew Literature. Jewish Archaeology; Ewald's Antiquities of Israel	9 Div.	1
Prof. Allen	Classical Philology	Text Criticism and Interpretation. Subject for 1880–81: Euripides' Alcestis and Horace's Odes	2 Grad. 1 Sen.	2
Prof. Allen	Classical Philology	Mythology and Religious Institutions of the Greeks and Romans	2 Grad. 4 Sen.	2
Prof. Smith and Prof. Greenough	Classical Philology	Critical Study from the Original Sources of Virgil's Georgics, and Cicero's De Re Publica	1 Grad. 3 Sen.	2
Prof. Bartlett	Germanic Philology	Gothic. Heyne's Ulfilas and Bernhardt's Vulfila	1 Sen.	1
Prof. Bartlett	Germanic Philology	Middle High German. The Nibelungenlied	3 Sen. 1 Jun.	1
Prof. Palmer	Philosophy	Hegel's Logic	2 Grad. 2 Div. 2 Law	1 (two hrs.)
Dr. Emerton	History	Study of Historical Sources for the rise of the French Communes 1100–1300	2 Grad. 2 Sen.	1 (two hrs.)
Prof. Torrey	History	Public International Law. History of Modern Treaties	3 Sen. 1 Grad.	3
Prof. Torrey	History	Forms of Government and Political Constitutions, particularly in Continental Europe, since 1789	5 Sen. 2 Grad.	2
Prof. Gurney	History	Roman History to the Fall of the Republic, with especial reference to the development of Political Institutions in Greece and Rome.	1 Sen. 3 Soph.	2
Prof. Paine	Music	Richter's Canon and Fugue. Composition	3 Sen. 1 Jun. 2 Unm.	3
Prof. Paine	Music	Free Thematic Music. Bussler's Formenlehre. Composition	3 Sen. 2 Unm.	2
Prof. Trowbridge	Physics	Experimental Physics, with Laboratory work, for advanced students	2 Jun. 2 Sen.	3
Prof. Trowbridge	Physics	Mathematical Physics (Maxwell's Electricity and Magnetism)	2 Sen.	3
Dr. Mark	Natural History	Embryology (with Laboratory work)	2 Grad. 3 Sen. 1 Sci.	1
Prof. Goodale	Natural History	Experimental Vegetable Physiology	1 Grad.	2
Prof. Farlow	Natural History	Anatomy and Development of Higher Cryptogams, and of Fungi and Algae	2 Grad.	3
Prof. Shaler	Natural History	Palaeontology (with Laboratory work)	4 Sen. 2 Grad.	2
Prof. Shaler	Natural History	Historical Geology (with Laboratory work)	1 Sen. 1 Sci. 2-Grad.	2
Prof. Shaler and Mr. Davis	Natural History	Geological Fieldwork; for training in the principles of Geology, with work in the field and in the preparation of reports.	2 Sen. 2 Sci. 2 Grad.	-
Prof. Whitney	Natural History	Dynamical Geology	3 Grad. 3 Sci. 3 Instr.	2
Prof. Whitney	Natural History	Economical Geology	1 Grad. 3 Sci.	2

The names of those on whom the degrees of A.M., Ph.D., and S.D. were conferred at Commencement, 1881, are as follows: —

William Zebina Bennett, A.B., 1878.
Henry Champion Jones, A.B., 1880.
James Otis Lincoln, A.B., 1873.
Edwin Howard Lord, A.B. (*Bowdoin Coll.*), 1871.
William Taggard Piper, A.B., 1874.
Charles Wellington Stone, A.B., 1874.
Alfred Worcester, A.B., 1878.

Ph.D.

FRANCIS ELLINGWOOD ABBOT, A.B., 1859.

Department, Philosophy. *Subject*, Metaphysics. *Thesis*, "Scientific Philosophy, a Theory of Human Knowledge, accompanied by Tables of Cosmical and Mental Categories."

WILLIAM HARLOW MELVILLE, A.M., 1876.

Department, Physics. *Subject*, Crystallography. *Thesis*, "A Crystallographic Study of a few Minerals and Chemical Substances."

S.D.

CHARLES FREDERIC MABERY, S.B., 1876.

Department, Physics. *Subjects*, Organic and Inorganic Chemistry. *Thesis*, "Acrylic Acid and its Derivatives."

The Parker Fellowships, during the year 1880–81, were held by

James Greenleaf Croswell, A.B., 1873,
Joseph Silas Diller, S.B., 1879,
Washington Irving Stringham, A.B., 1877,
Ph.D. (*Johns Hopkins Univ.*), 1880,
George Lincoln Walton, A.B., 1875, M.D., 1880;

and the Kirkland Fellowship by

Oscar Roland Jackson, A.B., 1876.

Messrs. Croswell and Jackson resigned their fellowships at the end of the academic year, after holding them for the full period of three years.

Mr. Diller and Doctors Stringham and Walton, having presented satisfactory evidence of the value of their work during the year, were reappointed to their fellowships for the year 1881–82.

Frank Hugh Foster, A.B., 1873,

was appointed to a Parker Fellowship for the year 1881–82, in place of Mr. Croswell; and

Paul Shorey, A.B., 1878,

was appointed to the Kirkland Fellowship for the year 1881–82, in place of Mr. Jackson.

JAMES MILLS PEIRCE, *Secretary of the Academic Council.*

TO THE PRESIDENT OF THE UNIVERSITY:

SIR, — As Dean of the Theological Faculty, I respectfully submit the following report for the academic year 1880–81. Twenty-five students were connected with the school during the year, as follows: —

Senior Class	6
Middle Class	5
Junior Class	5
Special Students	9

The nature and amount of the work of the School may be learned from the accompanying table, pp. 66, 67. In addition to the studies there named, it should be stated that Mr. Allen read the *De Natura Deorum* of Cicero with a voluntary class including about half the members of the School. The subject of Charities and Reforms was represented this year only by an interesting lecture given by Charles L. Brace, of New York, in regard to his important work in that city. This lecture was afterward printed at the request of the Faculty and students of the School.

Fourteen students received instruction in connection with College classes. These took in all ten studies, as follows: six studied Philosophy with Professor James; two, Philosophy with Professor Palmer; five attended the lectures of Professor Hedge on German Literature; three studied German with Professor Bartlett, and one with Mr. Lutz; two, the Fine Arts with Professor Moore. Geology, Zoölogy, Electricity, Mineralogy, Rhetoric, and Greek, were pursued each by one student. In several cases, more than one of these studies were taken by the same individual.

The voluntary system of attendance on school exercises had been quietly adopted a year or two earlier. Records of absences were, however, kept. This year the method was completely carried out, all monitorships being abolished. It is gratifying to state that the attendance on all exercises during the year was remarkably good.

The money that had been so generously given in response to the late appeal of the School for an increased endowment, made it possible during the last year to fill once more the Parkman Professorship. The appointment of Rev. Francis G. Peabody to this position was a most fortunate one for the School. The appointment was in no sense an experiment, as Mr. Peabody had shown his eminent fitness for the work during the year in which it had been practically in his hands.

The subject specially committed to Professor Peabody will be Homiletics. In this School, Homiletics is taught largely by practical methods, as will appear from the table to which reference has already been made. It is not believed that the writing of sermons can be to any great extent learned from lectures. The teacher works with the students, learns what each is trying to do, and guides him to the accomplishment of his purpose. The labor demanded of the teacher thus varies with the number of students. At present, time is left to the Instructor for teaching other branches. After Homiletics, Ethics will be the subject most important in the work of the Parkman Professor. At the same time he will be able to supplement the course in Systematic Theology by lectures on the Philosophy of Religion. The Bussey Professor will retain the departments of Systematic Theology and Comparative Religion. These two studies are closely connected, and it is helpful to have both in the same hands. The new appointment will make it possible to extend the treatment of Systematic Theology, an extension which is greatly needed.

The librarian, Mr. C. J. Staples of the Senior class, rendered valuable service during the year, devoting to this charge much time and labor. An entire recount of books on the shelves was made, by which it appears that in October, 1880, these numbered 18,757. In pursuance of the plan by which works not belonging to the department of Theology, and not there duplicated, are transferred to the Library at Gore Hall, 996 volumes have been thus removed. One hundred and two books have been added to

Instructor.	Subjects and Methods of Study.	Number of Students.	Exercises per Week.
	JUNIOR CLASS.		
Prof. Everett.	Philosophical Introduction to Theology. Everett's "Science of Thought." Lectures.	7	1
Prof. Abbot.	New Testament; Textual Criticism of Gospel of Matthew, chapters i.–xiii. Lectures and Recitations. Dissertations by students.	5	2
Prof. Toy.	Hebrew Forms, Translation from Hebrew into English and from English into Hebrew. Portions of Genesis, Ezekiel, and Psalms were read, and of these a part committed to memory. Lectures on the origin of Hebrew Poetry. Text-books, Davidson's Grammar, Hebrew Bible, Lexicon of Gesenius or Davies.	7	8
Mr. Allen.	Ecclesiastical History, First Period, to end of eighth century; Lectures, with discussions, and constant reference to original authorities.	6	2
Prof. Peabody.	Homiletics, Lectures; Analysis and plans of sermons.	6	1
Mr. Ticknor.	Elocution.		
	MIDDLE CLASS.		
Prof. Everett.	Comparative Religion; Studies of Vedic, Avestan, Buddhist, and Chinese Religions; with constant reference to translations and other works reserved for the use of students.	9	2
Prof. Abbot.	New Testament; Exegesis of the Gospel of Matthew, chapters xiv.–xxviii., Critical Introduction to Gospel of John and Exegesis of chapters i., ii.	7	2
Prof. Toy.	Biblical Aramaic Forms and Syntax, Hebrew Syntax, Reading from Deuteronomy, Ezekiel, Psalms, Daniel, Ezra, Esther, and the Aramaic in Riggs's Manual. Exegesis of the text read. Lectures on Old-Testament Prophecy and the date of the Book of Daniel. Text-books, Riggs's Chaldee Manual and Gesenius's Hebrew Grammar.	6	2

MIDDLE CLASS — Continued.

Mr. Allen.	Ecclesiastical History, Second Period, from ninth to fifteenth century inclusive. Chief authorities, Milman's Latin Christianity and Greenwood's Cathedra Petri. The students were also referred to other sources. — Lectures, Discussions, and Essays.	6	2
Prof. Peabody.	Homiletics, Sermons preached by the students before the two upper classes and criticised by students and teacher.	15	1
Prof. Peabody	Ethics; Lectures, Conversations, and References.	7	1
Mr. Ticknor.	Elocution. Each student thirty minutes a week.		

SENIOR CLASS.

Prof. Everett.	Systematic Theology; Lectures. Essays by students.	9	8
Prof. Abbot.	New Testament; Exegesis of Epistle to the Romans, chapters iii.-xvi.; Critical Introduction to the Gospel of John, and Exegesis of select portions.	8	2
Prof. Toy.	Lectures on the History of Old Testament Literature. Ewald's "Antiquities of Israel" was read with questions and comments.	8	1
Mr. Allen.	Ecclesiastical History, Third Period, from beginning of sixteenth century to the present time; Lectures and Discussions.	7	2
Prof. Peabody.	Homiletics, with the Middle Class as above.	15	1
Prof. Peabody.	Pastoral Care; twelve Lectures, open to the whole school.	20	1
Mr. Ticknor.	Elocution. Each student forty-five minutes a week.		

GENERAL EXERCISES.

Preaching by some student every Friday evening, open to the public; the sermon carefully prepared and submitted in advance to the teacher of Homiletics.

Extempore speaking once in two weeks; each speaker being criticised by members of the Faculty in the presence of the School.

Conference meeting, conducted by students, the Faculty being present and taking part, once in two weeks (alternating with the above).

Morning prayers, conducted by students and teachers.

the Library during the year by donation or purchase. Professor F. G. Peabody presented to the School a bust of Henry W. Bellows, D.D. This was received with pleasure and placed in the Library.

C. C. EVERETT, *Dean.*

TO THE PRESIDENT OF THE UNIVERSITY:

SIR, — I beg to submit the following report upon the Law School for the academic year 1880–81: —

The table on pp. 70, 71, gives the courses of study and instruction during the year, the names of the instructors, the text-books used, the number of exercises per week in each course, and the number of students who offered themselves for examination in each course at the end of the year.

There were seven Moot Courts held during the year, — four by Professor Gray, two by Professor Thayer, and one by Professor Ames.

The following table exhibits the attendance at the School during the last eleven years: —

	1870–71.	1871–72.	1872–73.	1873–74	1874–75.	1875–76.	1876–77.	1877–78.	1878–79.	1879–80.	1880–81.
Whole number of students in the School. .	165	138	117	141	144	173	199	196	169	177	161
Number that were in the School during the whole year	107	107	109	121	130	153	168	172	137	138	136
Number that were in the School only part of the year	58	31	8	20	14	20	31	24	32	39	25
Average number	136	123	113	131	137	163	184	183	154	157	149

The following table exhibits the School as divided into classes since the establishment of the three years' course and the examination for admission: —

	1877–78.	1878–79.	1879–80.	1880–81.
First Year	72	63	78	57
Second Year . . .	79	50	32	58
Third Year. . . .	—	—	21	14
Special Students. .	31	47	46	32

In regard to the foregoing table, it is to be observed that, although the three years' course went into operation at the beginning of 1877–78, there was no third-year class until 1879–80. It is also to be observed that the second-year class of 1877–78 did not take the three years' course, but was graduated at the end of the second year, that class having entered the School before the three years' course went into operation.

The following table exhibits the results of the examinations for admission in each year since they were established: —

	1877-78.	1878-79.	1879-80.	1880-81.
Offered	16	15	18	25
Admitted . . .	7	7	12	13

The following table exhibits the results of the examinations for a degree in each year since the establishment of the three years' course: —

	1877-78.			1878-79.			1879-80.			1880-81.		
	Offered.	Passed.	Failed.	Offered.	Passed.	Failed.	Offered.	Passed.	Failed.	Offered.	Passed.	Failed.
First Year .	66	51	15	50	42	8	73	69	4	45	48	2
Second Year	66	47	19	40	39	1	28	26	2	49	46	8
Third Year .							22	18	4	18	18	0

In regard to the foregoing table, it is to be observed that it includes no special students, and hence that all the applicants included in it were either graduates of colleges, or had passed the examination for admission. Of course, this remark does not apply to the second-year class of 1877–78, and this accounts in part for the much greater number of failures in that class.

The following table exhibits the number of students who, since the establishment of the three years' course, have been examined

Studies.	Instructors.	Text-books.	Exercises per week.	Number of students examined.
		FIRST YEAR.		
Real Property.	Prof. Gray.	No text-book.	2	45
Contracts.	Prof. Langdell.	Langdell's Cases on Contracts.	3	46
Torts.	Mr. Howland.	Ames's Cases on Torts.	3	45
Criminal Law and Criminal Procedure.	Prof. Thayer.	No text-book.	1	48
Civil Procedure at Common Law.	Prof. Ames.	Ames's Cases on Pleading.	1	40
		SECOND YEAR.		
		HONOR COURSE.		
Evidence.	Prof. Thayer.	No text-book.	2	39
Jurisdiction and Procedure in Equity.	Prof. Langdell.	Langdell's Cases in Equity Pleading.	2	39
Property.	Prof. Gray.	No text-book.	2	39
Trusts and Mortgages.	Prof. Ames.	Ames's Cases on Trusts.	2	39
		ORDINARY COURSE.		
		Elective Subjects.		
Evidence.	Prof. Thayer.	No text-book.	2	15
Jurisdiction and Procedure in Equity.	Prof. Langdell.	Langdell's Cases in Equity Pleading.	2	4
Property.	Prof. Gray.	No text-book.	2	16
Trusts and Mortgages.	Prof. Ames.	Ames's Cases on Trusts.	2	16
Sales of Personal Property.	Prof. Thayer.	Langdell's Cases on Sales.	2	11
Bills of Exchange and Promissory Notes.	Prof. Ames.	Ames's Cases on Bills and Notes.	2	11

THIRD YEAR.

HONOR COURSE.

Required Subjects.

Jurisdiction and Procedure in Equity.	Prof. Langdell.	Langdell's Cases on Equity Jurisdiction.	1	7
Partnership and Corporations.	Prof. Ames.	Ames's Cases on Partnership.	2	7

Elective Subjects.

Sales of Personal Property.	Prof. Thayer.	Langdell's Cases on Sales.	2	6
Bills of Exchange and Promissory Notes.	Prof. Ames.	Ames's Cases on Bills and Notes.	2	6
Conflict of Laws.	Prof. Gray.	No text-book.	1	4
Constitutional Law.	Prof. Thayer.	No text-book.	1	4
Agency and Carriers.	Prof. Thayer.	No text-book.	1	7
Wills and Administration.	Prof. Gray.	No text-book.	1	4
Jurisprudence.	Prof. Gray.	Austin on Jurisprudence.	1	8

ORDINARY COURSE.

Elective Subjects.

Jurisdiction and Procedure in Equity.	Prof. Langdell.	Langdell's Cases on Equity Jurisdiction.	1	8
Partnership and Corporations.	Prof. Ames.	Ames's Cases on Partnership.	2	14
Sales of Personal Property.	Prof. Thayer.	Langdell's Cases on Sales.	2	6
Bills of Exchange and Promissory Notes.	Prof. Ames.	Ames's Cases on Bills and Notes.	2	4
Conflict of Laws.	Prof. Gray.	No text-book.	1*	4
Constitutional Law.	Prof. Thayer.	No text-book.	1†	5
Agency and Carriers.	Prof. Thayer.	No text-book.	1	14
Wills and Administration.	Prof. Gray.	No text-book.	1	20
Jurisprudence.	Prof. Gray.	Austin on Jurisprudence.	1	8
Evidence.	Prof. Thayer.	No text-book.	2	1
Trusts and Mortgages.	Prof. Ames.	Ames's Cases on Trusts	2	1

* For the first half of the year.

† For the last half of the year.

for a degree in the studies of any year without having been members of the School during that year: —

	1877-78.			1878-79.			1879-80.			1880-81.		
	Offered.	Passed.	Failed.	Offered.	Passed.	Failed.	Offered.	Passed.	Failed.	Offered.	Passed.	Failed.
First Year . .	5	2	3	3	2	1	6	4	2	6	4	2
Second Year .							1	1				
Third Year .							5	4	1	4	4	

The following table exhibits the results of the examinations for the honor degree in each year since it was established: —

	1878-79.			1879-80.			1880-81.		
	Offered.	Passed.	Failed.	Offered.	Passed.	Failed.	Offered.	Passed.	Failed.
Second Year .	26	12	14	17	7	10	39	16	23
Third year . .				9	7	2		8	2

The following table exhibits the number of students who have entered the School in each year during the last eleven years, and shows how many of them were graduates of colleges, and, of the latter, how many were graduates of Harvard and how many of other colleges.

	1870-71.	1871-72.	1872-73.	1873-74.	1874-75.	1875-76.	1876-77.	1877-78.	1878-79.	1879-80.	1880-81.
Whole number of entries	105	92	87	95	102	119	128	111	102	124	91
Graduates of colleges . .	60	56	47	58	55	67	77	79	62	76	60
Harvard graduates . . .	19	26	22	29	40	39	47	47	38	59	41
Graduates of other colleges	41	30	25	29	15	28	30	32	24	17	19
Non-graduates	45	36	40	37	47	52	51	32	40	48	31

The three years' course cannot yet be pronounced an entire success. It is true that another strong measure went into operation at the same time as the three years' course, namely, the examination for admission; but the latter, while it has reduced largely the number of candidates for a degree, has not reduced the total numbers of the School so much as it was expected to do; a large number of those who, but for the examination for admission, would have entered as candidates for a degree, having entered as special students. It is also true that there has not been a great falling off in the number of new men entering the School in each year, especially if it be borne in mind that the number of new entries, during the two years preceding the date when the three years' course went into operation (September, 1877), was abnormally large. In other words, it does not appear that the three years' course has prevented any considerable number of men from entering the School. I say it does not appear; for it must be admitted that the number of Harvard graduates entering the School within the last few years has been anomalous and unsatisfactory; but we have no evidence that this state of things is chargeable to the three years' course. For many years the number of Harvard graduates entering the School in each year averaged little more than twenty; and the number remained unchanged after the College classes had increased greatly in numbers. In 1873–74 the number went up to twenty-nine; in 1874–75 it went up to forty; in 1876–77 it went up to forty-seven; and it was the same in 1877–78, being the first year that the three years' course was in operation. The next year the number dropped to thirty-eight, but in 1879–80 it went up to fifty-nine. In the year under review, however, it dropped again to forty-one, and during the now current year the number thus far does not reach thirty. Since the three years' course went into operation, therefore, the number of Harvard graduates entering the School has varied from the lowest in several years to the highest that we have ever had. No clear explanation of this phenomenon has yet been discovered. There is no evidence that the three years' course has anything to do with it. Perhaps the most probable explanation is, that a smaller proportion than usual of the last two College classes has studied Law. Whatever the explanation may be, the falling off in Harvard graduates during the last two years has affected the School very materially. But for that, the number of new entries would have been entirely satisfactory, and the total number in the School would in all probability be greater at this moment than ever before.

There is, however, another test by which the success of the three years' course may be tried, namely, the ratio between those who enter the School as candidates for a degree and those who complete the course; and tried by this test the success has not been great. Thus, the first class that took the three years' course numbered, when it entered, — that is, when the catalogue was issued, — seventy-two, and three more entered the class subsequently, thus making the total number of men belonging to the class at any time seventy-five. Of these, only fifty entered the second year, and only twenty entered the third year. The number of candidates for a degree at the end of the third year was twenty-one, including five who were not in the School during the third year, but who returned at the end of the year to be examined. The second class that took the three years' course numbered in all sixty-five men. Of these, only thirty-two entered the second year, and only thirteen entered the third year. The number of candidates for a degree at the end of the third year was sixteen, including three who had not been in the School during the year. The third class that has taken the three years' course (and which is now in its third year) has numbered in all eighty-two men. Of these, fifty-seven entered the second year, and twenty-four entered the third year and are now in the School. Of course, this falling off is not wholly chargeable to the three years' course. Every class is expected to lose more or less of its members, during its course, from what may be termed natural causes; and in the Law School the annual examinations cause a material loss of numbers to every class. Still, after all deductions have been made, a large part of the falling off in the three classes just referred to must be attributed to the three years' course.

It was fully expected, when the three years' course and the examination for admission were established, that their combined effect would be to reduce largely for a time the number of students in the School; but how great this effect would be, which of these measures would have the most agency in producing it, and in what particular way it would be produced, could not of course be foretold with any certainty. In some respects the expectations which were formed have not been justified by experience. For example, the number who pass the examination for admission is much smaller than was anticipated; but, on the other hand, the number who enter as special students is much larger than was anticipated. So, in regard to the three years' course: it was expected to deter men from entering the School rather than to cause them to leave before completing the course; and it was hoped that a third-year class would compensate largely for the falling off in the number of new entries. In a word, it was not anticipated that these two measures would have their greatest effect in reducing the ratio of those who take the degree to the whole number who enter the School. Such, however, is the result of our experience thus far. It is our degree, therefore, if anything, that is in immediate danger; for, while a degree like ours is most likely to be injured by being made too easy of attainment, it may be injured by being made too difficult of attainment, or rather by reducing too much the proportional number of those who take it. The latter is our present danger. What, then, is the nature of the remedy to be applied? If our present standard is higher than it ought to be, the true remedy is to lower it; but if it is not, the true remedy is to take such measures, if possible, as will bring the standard of the School up to the standard prescribed for the degree. The latter is believed to be the true view, as well as the view of all or nearly all of those who have a voice in the question. What measures, then, can be taken to raise the standard of the School, — in other words, to cause a larger proportional number of students to enter as candidates for the degree and to complete the course? In regard to students entering as candidates for a degree, it depends upon the student's preliminary education; and I am not aware that we can do any more than we have done to raise the standard of that. The rest must be left to time. In regard to the three years' course, however, two measures might be taken which would lend it a powerful support; but unfortunately they both require money. One of these is an increase in the amount of instruction offered; the other is the establishment of several scholarships for the support of such students of high promise as are unable to bear the heavy expense of a three years' course in the Law School.

In respect to its teaching force, the Law School has been peculiarly unfortunate since the establishment of the three years' course. For many years prior to 1870 all the teaching in the School was done by three professors; but then the whole School constituted in effect but one class, all the instruction being given to the whole School indiscriminately, every student being expected to receive it all. It is true there was, in a sense, a two years' course, that is, the instruction given embraced a range of subjects which was designed to occupy the student two years; but as this course was only taught once in two years, that is, half of it in each year, it did not at all affect the amount of instruction given in any year. In 1870 measures were taken for dividing the School into classes, and accordingly the entire course was taught every year. This made an increase of the teaching force necessary, but it was made by means of lecturers temporarily employed. This state of things continued until 1873, when for the first time an assistant professor was appointed. This appointment increased the teaching force of the School largely at a small expense, as the assistant professor did the full work of a full professor from the beginning, while he received only half of a full professor's salary. Two years later, in 1875, the resources of the School having increased, a new professorship was created, and a new professor appointed to fill it. This gave us four full professors and an assistant professor, and yet we had only a two years' course. Accordingly, more instruction was given than any student was required to take; in other words, an elective system was introduced to some extent. During the year following the establishment of the new professorship, the Faculty voted to establish a three years' course and an examination for admission, both to take effect in September, 1877. About the same time the senior professor of the School, Professor Emory Washburn, resigned, his resignation taking effect in September, 1876. If everything which has since happened could then have been foreseen, it might perhaps have been thought best to leave this professorship vacant for a time; for, on the one hand, the school could have got on very well with four professors until there should be a third-year class, while, on the other hand, there was the certainty of our needing additional teaching force in three years, that is, as soon as we should have a third-year class, with a probable material diminution in our means of paying for it. However, an opportunity offered to make a brilliant and attractive appointment, — one also which was urged by a strong and unanimous public opinion in the legal profession of Boston, — and accordingly the vacancy was filled immediately. Before the year was out the assistant professor resigned, and to secure his services permanently it became necessary to appoint him to a full professorship. His new appointment took effect in September, 1877, that is, at the same time that the three years' course and the examination for admission went into operation. Thus, at that date the School had five full professors at an annual expense of $22,500 for salaries. This state of things continued for two years, during which time there were only two classes to be taught; and during the last of these years, there being no graduating class in the school, our expenses exceeded our income by more than $4,500. At the end of these two years the professor who had succeeded Professor Washburn resigned. It had then become evident that our numbers were to be materially reduced, and, at the same time, the income of the school from invested property had greatly fallen off in consequence of the long-continued depression in business. Consequently, the Faculty were informed by the Corporation that the school could not afford the appointment of a new professor, or even of an assistant professor, and that the four remaining professors must undertake the instruction of three classes, with the assistance perhaps of a lecturer, who would take one course. Accordingly, this programme was carried out, and ever since we began to have a third-year class all the instruction has been given by four professors, with the exception of the subject of Torts, which has been taught by a lecturer. Merely to say, however, that these four professors and one lecturer have been required to instruct three distinct classes, each of them pursuing separate subjects, is not to state the case in its full strength. If that were all, there would be little ground of complaint as regards the amount of instruction given, at least on the part of the students and the public; for there are twenty-nine hours of instruction given every week, and it is conceded that ten hours constitute full work for a student. Indeed, prior to 1870 the instruction given had never exceeded ten hours per week, though there were three full professors. In order to understand the present situation, therefore, it is necessary to bear in mind that for several years before the three years' course came into full operation an elective system had to some extent become a feature of the School, and the students had become accustomed to having some choice in their studies, and expected it. Moreover, in a three years' course it was found necessary to teach some subjects which it would not be reasonable to require every student to take. It was found necessary, therefore, to provide a certain number of electives, notwithstanding the lengthening of the course. Yet, with the present teaching force of the school, there was but one way of providing them, namely, by reducing the amount of work required of each student. Accordingly, certain subjects were made elective, and less than full work was required of any student during the second and third years. It was hoped that this would not be unacceptable nor even unprofitable to the students, as it would leave a certain amount of time at their own disposal, and thus enable them, in the latter part of their course, to cultivate the habit of legal investigation without the aid or guidance of a teacher. The students, however, seem not to have taken this view; but rather to have thought that it was possible to crowd the bulk of the work of three years into two years, and thus to save an entire year in time and expense, without any material loss, and that this saving was an object worth struggling for. Indeed, there is reason to believe that this has been with some an object not merely of economy, but of ambition. Certain it is that this object has been pursued by some of the most ambitious men in the School, who could well afford both the time and expense of three years' study. That the supposed possibility of gaining all the substantial advantages that the School has to offer in two years instead of three is a sore temptation to the great majority of students in point of economy, ought to excite no one's surprise; and this leads me to the consideration of the second measure above suggested as a means of supporting the three years' course, namely, the establishment of scholarships.

It is impossible to consider such a measure without being reminded of the difficulty of getting the money and the time necessary for systematic and thorough professional education. Those who have the money are not willing to give the time, and those who have not the money cannot get it for that purpose. This is particularly true of Law and Medicine, Theology standing upon grounds peculiar to itself. It is also believed to be specially characteristic of English-speaking countries, and to arise from the long habit, in those countries, of sacrificing professional education to academic or collegiate education. This habit had its origin in England. It is a well-known fact that the English Universities long since ceased to be universities in the true sense of the term, and became mere associations of colleges, each college devoting itself wholly to the instruction of undergraduates, that is, to candidates for the degree of Bachelor of Arts; so that this degree, instead of being preliminary merely to a doctor's or a master's degree in some one of the recognized departments of learning, became in effect the only degree given. Hence, the idea was assiduously cultivated and propagated by those institutions, that those studies which lead to the degree of Bachelor of Arts are the only liberal studies, the only studies worthy to be pursued for their own sake or to be taught in an institution of learning, and the only studies which the public is interested in promoting; that when one receives the degree of Bachelor of Arts, his liberal education is completed; that it is one of the functions of a liberal education to give the student such a training as will enable him to master any subject without instruction in it, and that a liberal education renders all further instruction in any subject unnecessary, if not superfluous; that a Bachelor of Arts is prepared to "go out into the world," and engage in the business of life, whatever that may be; that professional learning or professional knowledge (as it would rather be called) is a thing to be "picked up" by degrees, and acquired by experience and practice, like the knowledge of any ordinary business or pursuit; that one's professional eminence will depend (*ceteris paribus*) upon his academic education and upon his opportunities for practising his profession, rather than upon the amount of time and labor that he devotes to regular and systematic professional study; that professional learning is pursued solely for the profits and emoluments which it brings, and that these will cause it to be pursued with sufficient eagerness; that the public has no interest in increasing the number of lawyers and doctors, and, though it has an interest in improving their quality, yet that object, so far as it depends upon professional study, will be best secured by the principle of competition. These ideas have been inherited by American colleges, and have been as assiduously cultivated by them as by their English prototypes. Moreover, both the English and the American colleges have accomplished their object so successfully that money has seldom been given in either country, whether by the State or by individuals, for the promotion of legal or medical education. If I am correctly informed, in all the long list of benefactors of this University, extending through near two centuries and a half, only four persons will be found, namely, Isaac Royall, Nathan Dane, Benjamin Bussey, and George Bemis, who have given money with the object of promoting legal education; and not a dollar has ever been given by any one towards furnishing pecuniary aid to students in the Law School. In this latter respect the College presents a contrast which is sufficiently striking; for it appears by the Catalogue for the current year that no less than one hundred and twenty scholarships, varying in their annual income from forty dollars to three hundred and fifty dollars, have been established in the College which are actually available, besides several which are not yet available. Besides these, it appears that the College has an annual income of about two thousand dollars which is given to students, and an annual income of nearly three thousand dollars which is lent to students. Altogether the gifts made to the College for the purpose of furnishing pecuniary aid to undergraduates have been so munificent as to warrant the statement in the Catalogue that good scholars of high character but slender means are seldom or never obliged to leave College for want of money.

The prevalence of such ideas in regard to professional education has had even a worse effect in this country than in England, so far at least as regards the legal profession, and that chiefly for two reasons: First, the English colleges have within their gift a large number of fellowships, mostly of ancient foundation, for which graduates alone are eligible; and although few if any of them were founded with any view of promoting legal education, many if not most of them are available for the support of the holders of them while studying law; and to these fellowships the English bench and bar have been indebted for many of their brightest ornaments. In this country, it is believed, there is no analogous provision whatever of which a student of law can avail himself, even as a reward for undergraduate study. There are, indeed, in this University seven fellowships, all recently established, the income of which furnishes a liberal support to their respective holders; but not one of them was established for the promotion of professional study, and not one of them is available for a student in the Law School. Secondly, although in England the State has done little or nothing directly for legal education, it has done much for the legal profession. Indeed, it is doubtful if ever, in any country, any profession has occupied a position so exalted as the higher branch of the legal profession in England.

In consequence of a very highly centralized judicial system, and in consequence of the profession being divided by law into two branches (counsel and attorneys), all the members of the higher branch, at least with few exceptions, reside in the metropolis and form a large, compact, distinguished, and influential body of men, inheriting great traditions, endowed with great privileges, and clothed with great powers, — with the power, among others, of determining, without appeal, what new members shall be admitted into the body, and whether existing members shall remain in it, and upon what terms. I say without appeal; for, though the judges have a visitorial power over the body, yet the judges are all taken from the body and continue to be members of it. Every member of this body, on the one hand, feels the influence, shares the advantages, and enjoys the support and protection of the entire body, and, on the other hand, has all the members of the body to compete with; and upon those who succeed in struggling to the front the State showers its honors and rewards to an extent absolutely unprecedented. Under such a system, legal education will take care of itself in a great measure, at least so far as the interests of the public are concerned. In this country, on the other hand, the State has, upon the whole, done its best to reduce the legal profession to the level of an ordinary pursuit; it has neither done anything for it, nor permitted it as a body to do anything for itself. The profession does not constitute one organized body at all; and if it can be said to have any organized bodies within it, they are of the slightest and feeblest description, and do not embrace respectively more than a single city or county. It is true that judges are taken from the legal profession; but that is from the necessity of the case; and it is scarcely too much to say that no effort has been wanting to strip the judicial office of its traditional honors and emoluments. If any one desires to compare the condition of the profession in this country and in England, it may be said that it is here what it would become in England if the institution of barristers should be suddenly abolished, and it should be provided that henceforth every attorney should, *virtute officii*, also be a barrister; and if the courts, instead of sitting constantly in the metropolis and administering justice for every part of the kingdom indiscriminately, should become itinerant, travelling from county to county and administering within each county separately the justice pertaining to that county.

A profession so situated has no means of elevating itself, because it has no means of raising the professional standard. Individual members may do something by precept and example, but the influence of good men in that direction is always liable to be counteracted by the influence of bad men in an opposite direction. The only sure way of raising the professional standard is by raising the standard of legal attainments, education, and character in the men by whom the profession is recruited, or at least in the better class of them.

It may not be amiss to notice two or three of the most plausible arguments against the claims of professional, and especially legal, education to pecuniary encouragement and support. First, it is said that young men study law for their own advancement in life, and not with any view to serving the public, and that the attractions of the profession are so great that too many, rather than too few, enter it; and hence it neither deserves nor needs any pecuniary support from the public. It is true that there are lawyers enough; but they are not good enough; and to make them better is as difficult a task as any that educators have to perform. In some branches of study the difficulty is to obtain students; in law there are students enough, but the difficulty is to induce them to study anything of which they cannot make a direct application in practice; and it is hard to say which is the greater difficulty of the two. To the specific argument that there are too many lawyers already, and that the interest of the public lies in reducing their number, the answer is, that the best possible way of accomplishing this latter object is to raise the standard of legal education. The lower this standard is the more numerous will lawyers be, and *vice versa.* Secondly, it is sometimes said that a young man who has received a good college education ought to be able to make his own way. This argument either assumes the popular view of legal education to be the correct one, or it overlooks the great changes which have taken place within the last fifty years. The standard of college education has been so much raised that young men graduate from college now two or three years later in life than they did fifty years ago, and the expenses of living have much more than doubled since that time. On the other hand, the ability of young men to earn money by temporary pursuits, if it has increased at all, has not increased in anything like the same proportion. The change is illustrated by the fact that it was common at Harvard College fifty years ago for young men partly to earn their way through college by teaching school during the winter. Now, they can earn more money by working for college rank, and thus obtaining scholarships. The plain truth is, that it is in most cases impracticable for young men who have already taxed their resources to the utmost in obtaining a college education, to take a three years' course in the Law School, if they must earn the money to pay all their expenses. Thirdly, it is a common notion that the callings of professional men are of a commonplace, humdrum nature, and therefore are no more entitled to support from the public than most other callings which men follow for the purpose of gaining a livelihood. In other words, it is said that professional men do not labor for the advancement of science and learning. It is apparently upon this theory that students in the professional schools are excluded from all of the fellowships which have been recently established in the University for the benefit of graduates. Upon this subject there is a great deal of delusion, at least so far as law is concerned. That law is not only a science, but one of the greatest and noblest of sciences, there is and can be no dispute. That it is a science with which the most vital interests of the public and the State are closely bound up, is equally beyond dispute. It is also true that a knowledge of this science, in all its length and breadth, is or ought to be the object of every ambitious lawyer. But it will be said that in fact very few lawyers care anything for a knowledge of law as a science; that such knowledge is not necessary for professional success; that in fact the most successful lawyers are willing to take the law as laid down by the courts, without troubling themselves about the reasons or principles upon which it is founded. It must be confessed that there is some truth in this statement, and the argument founded upon it would have some weight if there were a class of men, separate and distinct from practising lawyers, who devoted themselves to the cultivation of law as a science; but there is no such class either in this or in any other English-speaking country, nor is there the least probability that there will be such a class within any period of time to which it is worth while to look forward. As it is now and always has been, whatever may be said of the short-comings of lawyers, they are the only class of men among us who have any knowledge of law as a science. They are the only material out of which judges or professors of law can be made. For example, there has never been a professor in this School who had not either practised law or studied with a view to doing so. Moreover, it is neither practicable nor desirable to have two systems of legal education, one for those who intend to be lawyers, and another for those who wish to study law as a science. The latter would, indeed, have no occasion to go into a lawyer's office; but so far as education in a law school is concerned, there is no occasion for making a distinction between the two classes. A law school which does not profess and endeavor to teach law as a science has no reason for existence. Surely it ought not to be said of this School that its aims are not sufficiently high to entitle it to pecuniary support, since it has suffered seriously in its material interests from a charge of being too scientific in its aims, too theoretical, and too little practical. Any one, therefore, who wishes to promote the study of law as a science will best accomplish his object by wisely promoting its study as a profession; and any attempt to accomplish such an object by divorcing the study of law as a science from its study as a profession is doomed to fail.

It only remains to show that the establishment of scholarships would be an efficient aid to the Law School in accomplishing its object of raising the standard of legal education. The specific object of the School, in procuring the establishment of scholarships, is to enable it to draw annually from the different colleges a few of their ablest and most promising men, whom it now has no chance of obtaining. The great value of a few such men added to the School would consist partly in the influence that they would have upon the School itself, and partly in the increased reputation that they would soon give the School throughout the country. The influence that they would have in the School would be of great, immediate, and certain value. Individual students in such a School are governed largely in their opinions and actions by what may be called the public opinion of the School, and in forming this opinion a few of the most prominent students are chiefly influential. If, for example, the ten most prominent men in each class should remain in the School three years and take a degree, there is no doubt that the others would soon follow their example, so far as circumstances permitted, and the success of the three years' course would thus be complete. So, if five out of the ten ablest men in each class had scholarships, and the other five had ample means, as the former would be sure to remain through the course and take their degree, the latter would do so also; for the ten would be each other's rivals, and able and ambitious men of means will never permit their rivals without means to enjoy better educational advantages than themselves.

It must also be remembered that the Law School can only accomplish its objects fully by means of students of high grade, and that the supply of such students is very limited in number at best; and if from this limited number must be subtracted all those who, having already incurred the expense of a good college education, cannot afford the heavy additional expense of three years in the Law School, the number from which the School can draw will be small indeed.

Whether any one will be found who has both the means and the will to devote a moderate sum of money to the purpose that I have indicated, I do not know. Perhaps no one but a member of the legal profession can be expected to take sufficient interest in the subject; but to any lawyer who has achieved fame and fortune, and who wishes to discharge in a liberal spirit the debt which every successful lawyer is said to owe to his profession, I should think no more attractive scheme could be suggested than that of establishing scholarships in the Law School. By devoting money to such an object, one can serve the public in the most attractive of all ways, namely, by conferring signal benefits upon a perpetual succession of worthy individuals. It is much the fashion to give money to institutions of learning for the erection of buildings; and if one wishes to serve the public by erecting a visible memorial of a family or a friend, such a memorial can certainly take no better form than that of a handsome building devoted to the interests of sound learning. Still, it is possible to overestimate the value of a building as a memorial. Like most of the physical works of men, buildings are destroyed by time, or rendered unfit for their original uses; and in this country of rapid changes time does its work in these respects with great rapidity. Then, one who takes the security of a visible memorial must trust to that alone. As individuals are not the objects of his bounty, he does not earn the gratitude of living men in successive generations who will be interested to keep his memory green. To be sure, his name will be perpetuated so long as his monument endures, but he has no security that he himself will be affectionately remembered. The man who founds scholarships may well say to him who puts his money into costly buildings: "Exegi monumentum aere perennius."

C. C. LANGDELL, *Dean*.

TO THE PRESIDENT OF THE UNIVERSITY:

SIR, — As Dean of the Medical Faculty, I submit the following report upon the Medical School for the academic year 1880–81: —

The whole number of students in attendance during the year was two hundred and fifty-one; during the first term two hundred and forty-five; during the second two hundred and forty. Of these, one hundred and twenty had a literary or scientific degree. There were eighty-five applicants for the degree of Doctor of Medicine, of whom twenty-five were rejected. Sixty passed the examination and received their degrees.

The Scholarships were awarded to Charles Goddard Stearns and George Clarence Shepard of the Third Class and to Alton Atwell Jackson and John Abbott Crosby of the Second Class. As Mr. Shepard left during the first term on account of illness, the Scholarship was given to John Walter Baker for the second term.

The results of the Fourth-year course require separate mention. The class was composed of ten students, of whom five received hospital appointments; one took the ordinary degree of M.D.; and four applied for the special degree intended for those who passed the examination of the fourth year; but as none of the four applicants fulfilled all the requirements, this degree was not awarded. The small size of the class should cause neither surprise nor disappointment. At the time the change was announced, the plans of the young men in the School had already been formed, and their studies had been arranged with reference to graduation at the end of three years. Moreover, the opportunities for entering the various hospitals attracted a number of the best students.

The results of this attempt to prolong the period of study cannot be determined for a number of years. If it is to succeed, the value of the additional instruction must be so manifest as to in-

COURSES OF INSTRUCTION FOR 1880–81.

Instructors.	Subjects.	Number of Exercises.
	FIRST CLASS.	
Prof. Holmes	Descriptive Anatomy	Four times a week till May.
Drs. Beach, Waterman, & M. H. Richardson	Practical Anatomy, with Exercises in Dissection	Fifteen times a week from November till May.
Drs. Dwight & Quincy	Laboratory Exercises in Histology	Twice a week till May.
Dr. C. S. Minot	Embryology	Twelve.
Prof. Bowditch	Systematic and Experimental Physiology	Four times a week.
Dr. Garland	Laboratory Exercises in Experimental Physiology	Twice a week for 5 weeks.
Dr. Hills	General and Analytical Chemistry	Twice a week, with ten additional exercises.
Dr. Hills	Practical Exercises in the Laboratory for General Chemistry	Daily.
	SECOND CLASS.	
Dr. Dwight	Topographical Anatomy	Once a week.
Drs. Beach, Waterman, & M. H. Richardson	Practical Anatomy, with Exercises in Dissection	Ten times a week till Jan.
Prof. Wood	Medical and Toxicological Chemistry	Twice a week.
Prof. Wood	Practical Exercises in the Laboratory for Medical Chemistry	Daily.
Dr. Bolles	Materia Medica, with Practical Demonstrations	Once a week.
Prof. Fitz	General Pathology and Pathological Anatomy	Twice a week.
Prof. Fitz	Special Pathological Anatomy, with Demonstrations	Twice a week.
Drs. Cutler & Whitney	Laboratory Exercises in Pathological Histology	Twice a week till April.
Prof. Fitz & Dr. Cutler	Practical Instruction in Performing Autopsies	Throughout the year.
Prof. Ellis	Clinical Medicine	Three times a week till May, with an additional weekly exercise during the first half-year.
Drs. Mason, Whittier, & Shattuck	Practical Instruction in Auscultation and Percussion	Daily during the first half-year.
Dr. Knight	Practical Diagnosis and Treatment of Diseases of the Larynx	Daily during the first half-year.
Dr. Warren	Recitations in Surgical Pathology	Once a week during the first half-year.
Dr. Warren	Recitations in Surgery	Once a week during the second half-year.
Dr. Warren	The Application of Bandages and Apparatus	Once a week during the second half-year.
Drs. Warren & W. S. Bigelow	Laboratory Exercises in Surgical Histology	Twice a week after Mar.
Prof. Bigelow	Clinical Surgery	Once a week till March.
Prof. Cheever	Clinical Surgery	Twice a week till April.
Dr. Porter	Clinical Surgery	Once a week after Feb.
	THIRD CLASS.	
Prof. Edes	Therapeutics	Three times a week.
Prof. Reynolds	Theory and Practice of Obstetrics	Twice a week.
Dr. W. L. Richardson	Recitations in the Theory and Practice of Obstetrics	Once a week.
Dr. W. L. Richardson	Practical Exercises in Operative Obstetrics	Twelve.
Dr. W. L. Richardson	Practical Instruction in Clinical Obstetrics	Throughout the year.
Prof. Minot	Theory and Practice of Physic	Five times a week.
Prof. Ellis	Clinical Medicine	Three times a week till May, with an additional weekly exercise during the first half-year.
Prof. Bigelow	Surgery and Clinical Surgery	Twice a week till March.
Prof. Cheever	Clinical Surgery	Twice a week till April.
Dr. Porter	Surgical Anatomy and Operative Surgery	Twice a week for two months.

COURSES OF INSTRUCTION—CONTINUED.

Instructors.	Subjects.	Number of Exercises.
	THIRD CLASS—CONTINUED.	
Drs. Porter & W. S. Bigelow	Practical Exercises in Operative Surgery	Twelve exercises of three hours each.
Prof. Williams	Diseases of the Eye	Once a week.
Prof. Williams	Clinical Ophthalmology	Once a week till January and after March.
Prof. White	Diseases of the Skin	Once a week.
Prof. White	Clinical Dermatology	Once a week.
Dr. Baker	Diseases of Women	Once a week.
Dr. Baker	Clinical Gynaecology	Twice a week till April.
Dr. Baker	Operative Gynaecology	Thirty-six practical exercises of one hour each.
Dr. Greenough	Practical Diagnosis and Treatment of Syphilis	Once a week during the first half-year.
Dr. Wigglesworth	Practical Diagnosis and Treatment of Syphilis	Once a week during the second half-year.
Dr. Green	Practical Diagnosis and Treatment of Diseases of the Ear	Once a week from January till April.
Dr. Blake	Anatomy, Physiology, and Diseases of the Ear	Twice a week for three months.
Dr. J. P. Oliver	Practical Diagnosis and Treatment of Diseases of Children	Once a week during the first half-year.
Dr. Rotch	Practical Diagnosis and Treatment of Diseases of Children	Once a week.
Dr. Webber	Practical Diagnosis and Treatment of Diseases of the Nervous System	Once a week till Feb.
Dr. J. J. Putnam	Practical Diagnosis and Treatment of Diseases of the Nervous System	Once a week.
Dr. Folsom	Mental Diseases	Eight, with occasional hospital visits.
Dr. Draper	Forensic Medicine, with Demonstrations	Twelve.
	FOURTH CLASS.	
Prof. Ellis	Clinical Medicine	Three times a week till Feb., and after March.
Prof. Edes	Clinical Medicine	Once a week after Feb.
Prof. Cheever and Dr. Warren.	Clinical Surgery	Twice a week till March.
Drs. Porter and W. S. Bigelow	Operative Surgery	Eight exercises of two hours each.
Dr. Bradford	Orthopedic Surgery	Twice a week for two months.
Prof. Reynolds	Obstetrics	Once a week.
Dr. W. L. Richardson	Clinical Obstetrics	Throughout the year.
Dr. W. L. Richardson	Operative Obstetrics	Fourteen exercises of two hours each.
Prof. Williams	Opththalmology	Once a week.
Prof. Williams	Clinical Ophthalmology	Twice a week for six months.
Dr. Wadsworth	Ophthalmoscopy	Five hours a week for two months.
Prof. White	Dermatology	Once a week.
Prof. White	Clinical Dermatology	Three times a week.
Dr. Baker	Gynaecology	Once a week.
Dr. Baker	Clinical Gynaecology	Four times a week.
Dr. Chadwick	Clinical Gynaecology	Three times a week after February.
Drs. Oliver & Rotch	Diseases of Children	Three times a week.
Drs. Webber & Putnam	Diseases of the Nervous System	Twice a week.
Dr. Folsom	Mental Diseases	Once a week after March.
Dr. Knight	Laryngology	Twice a week for two months.
Drs. Green & Blake	Otology	Twice a week for six months.
Drs. Greenough & Wigglesworth	Syphilis	Twice a week.
Dr. Curtis	Diseases of the Urinary Organs	Once a week for three months.
Miss Parloa	Cookery	Six exercises of two hours each.

duce those interested to avail themselves of it; the student must begin his studies with the idea of prolonging them, and must arrange them accordingly; and, as the hospitals must continue to demand their quota of assistants, these institutions must be satisfied that the services of young men who have studied four years are more valuable than those of students whose systematic instruction has terminated at the end of three. The attention paid to the second of these conditions already offers encouragement. In 1880–81, of sixty-nine matriculants, fourteen, or twenty per cent, announced their intention to take the additional course; while in 1881–82, of seventy-nine matriculants, twenty-four, or thirty per cent, announced a similar intention.

The table on pages 87, 88 shows the amount and character of the instruction given.

The results of the examinations for admission to the School under the additional requirements, as described in the catalogue, are given in the following table:—

	1877.				1878.				1879.				1880.				1881.			
	June.		Sept.		June.		Sept.		June.		Sept.		June.		Sept.		June.		Sept.	
	Offered.	Conditioned.	Offered.	Conditioned.	Offered.	Conditioned.	Offered.	Conditioned.	Offered.	Conditioned.	Offered.	Conditioned.	Offered.	Conditioned.	Offered.	Conditioned.	Offered.	Conditioned.	Offered.	Conditioned.
Physics	13	5	25	3	22	4	41	18	23	5	24	7	15	3	24	8	17	3	23	6
Latin	9	2	16	5	12	2	22	10	10	3	11	3	8	4	11	6	17	6	23	6
English	4	1	8	1	8	1	18	0	13	3	9	0	7	3	10	3	17	1	28	1
Elective	0	0	1	1	2	1	2	2	0	0	2	0	0	0	2	0	17	4	23	2
Total rejected	2		1		4		5		2		3		3		5		2		2	

In the following table will be found the statistics of rejections at the annual examinations of the School in June for the past four years.

JUNE EXAMINATIONS. — STATISTICS OF REJECTION.

		First Class.						Second Class.						Third Class.											
		Anatomy.		Physiology.		General Chemistry.		Medical Chemistry.		Materia Medica.		Path. Anatomy.		Theory and Practice.		Clinical Medicine.		Surgery.		Clinical Surgery.		Therapeutics.		Obstetrics.	
			Per ct.		Per ct.		Per ct.		Per ct.		Per ct.		Per ct.		Per ct.		Per ct.		Per ct.		Per ct.		Per ct.		Per ct.
1878	Passed	56		52		49		54		52		56		53		58		51		54		48		36	
	Rejected	17	23	25	32	14	22	8	12	13	20	11	16	3	5	7	11	0	0	0	0	4	7	21	36
	Total	73		77		63		62		65		67		56		60		51		54		52		57	
1879	Passed	78		59		83		64		57		59		56		64		58		60		57		51	
	Rejected	15	17	36	37	36	52	11	14	17	22	11	15	0	0	1	1	3	4	1	1	11	16	9	15
	Total	88		95		69		75		74		70		56		65		61		61		68		60	
1880	Passed	77		81		52		46		70		62		58		53		65		59		56		56	
	Rejected	15	16	27	25	15	22	11	19	18	15	11	15	9	13	10	15	1	1	11	15	13	18	9	13
	Total	92		108		67		57		83		73		67		63		66		70		69		65	
1881	Passed	58		42		37		70		69		77		74		67		73		77		82		66	
	Rejected	8	12	19	31	10	21	9	11	15	17	11	12	5	6	16	19	8	8	1	1	8	8	14	17
	Total	66		61		47		79		84		88		79		83		76		78		90		80	

Fourth Class.

		Ophthalmology.		Dermatology.		Clinical & Operative Obs.		Gynaecology.		Diseases of Children.		Diseases of Nervous System.		Mental Diseases.		Laryngology.		Operative Surgery.		Otology.		Forensic Medicine.		Syphilis.	
1881	Passed	9		7		7		8		9		9		9		9		9		8		9		9	
	Rejected	0	0	2	22	2	22	1	11	0	0	0	0	0	0	0	0	0	0	1	11	0	0	0	0
	Total	9		9		9		9		9		9		9		9		9		9		9		9	

The continued recognization of the truth that Medicine should be studied where there are means for teaching it is shown in the appended table: —

NUMBER OF TERMS SPENT AT THE SCHOOL BY GRADUATES.

	1872.	1873.	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.
Spent six terms	3 5%	8	22	14 47%	25 69%	40 65%	41 85%	62 88%	89 86%	49 81%
Spent five terms	0	3	2	7	5 13%	9	4	2 2%	1 2%	6 10%
Spent four terms	8 14%	8	6	6	4 11%	8	8	3 4%	4 8%	4 6%
Spent three terms	18 32%	15	5	0	2 5%	1	0	2 2%	0	1 1%
Spent two terms	27 48%	7	3	8 10%	0	3	0	1 1	1 2%	0
Total graduated	56	41	38	30	36	61	48	70	45	60

After repeatedly referring in these reports to the difficulty under which the School labored owing to the character and situation of the building into which most of its instruction was necessarily compressed, it is most gratifying to announce that a second liberal and ready response to our appeal for pecuniary aid has enabled the Corporation to begin the construction of a suitable building, which is now far advanced.

CALVIN ELLIS, *Dean.*

To the President of the University:

Sir, — I beg leave to submit the following report upon the Dental School for the year 1880–81: —

The number of students was seventeen, of whom three were third-year, three second-year, and eleven first-year students.

The studies of the first-year class are the same as those of the same year in the Medical School, and our students attend lectures and other exercises with the Medical Class of that year, and pass with them the same examinations.

The studies were Anatomy, by lectures and dissection, Physiology and General Chemistry, including the work in the Chemical Laboratory. The students of the second and third year attended, as a part of their regular course, in connection with the Medical Classes, twelve lectures in Surgical Pathology, given by the Professor of Clinical Surgery, two lectures in Oral Surgery, and one on Anaesthesia and Anaesthetics, by the Professor of Surgery.

The Professor of Operative Dentistry has lectured one hour each week on the theory and practical methods of filling teeth, and the usual clinical instruction has been given by the instructors in the Out Patients' Department of the Massachusetts General Hospital, which has supplied abundant material. So great has been the number of patients desiring attention, that the small class of operating students have been entirely unable to attend to all. This is, however, an advantage to the students, inasmuch as a choice of operations is made possible, and greater individual attention can be given by the instructors.

On each of five afternoons of every week during the academic year the Demonstrator and one of the instructors have been present in the Infirmary to give oversight to the work of the students, and such assistance as occasion called for. Clinics have also been given whenever opportunity served.

In the department of Mechanical Dentistry the Professor has devoted two hours or more of each week, one to lectures on theory and practice, and one to clinical instruction in the Laboratory. The Demonstrator has attended from nine o'clock till noon, for clinical teaching and aid to the students when aid was required, every day during the term, except Saturday and Sunday. Patients have been abundant, and opportunities have not been wanting for the diligent student to practise every branch of this department.

Dr. Manning K. Rand, Demonstrator of Operative Dentistry, and Dr. George F. Grant, Demonstrator of Mechanical Dentistry, both graduates of the School, have performed their duties with exemplary fidelity and success. Dr. Rand has felt compelled, by stress of other duties, to resign the position in which he gave so much satisfaction.

Dr. Charles Sedgwick Minot, Instructor in Oral Surgery and Pathology, has given three hours of every week to the instruction in his department. He has devoted much time to the careful training of the students in the use of the microscope and the preparation of sections. He reports to me as follows: —

"In the course on Oral Pathology and Surgery several changes were made, the most important being the addition of one morning's work in the Laboratory every week throughout the year. The object of this was to familiarize the students with the details of Dental Anatomy and Pathology, and the methods of preparation. Although the deficiencies of the Laboratory formed a very serious obstacle to rendering the course satisfactory, yet it is believed to have been of marked profit to the students, and therefore it appears eminently desirable to continue it. To do so properly requires the purchase of a supply of microscopes and other appliances, and also a small yearly appropriation. The cataloguing of the collection was completed by Dr. A. T. Cabot and Dr. Minot, and the latter also arranged and catalogued the microscopic preparations belonging to the School. Extensive additions to these last are a pressing necessity for the purposes of demonstration to the students."

Dr. Brackett, Assistant Professor in Dental Therapeutics, reports that he has given thirty-two hours' instruction in his department, devoting the first ten minutes of each interview to a recitation on the prominent points in the preceding lecture, and asserts that with each succeeding year he becomes more and more satisfied of the great value of such a recitation in fixing the instruction given. Dr. Brackett, in his instruction, makes use of a valuable collection of drugs and materials used in his specialty, which he has presented to the School.

The graduating class consisted of five.

Attention has been frequently called to the pressing pecuniary needs of the School, and early in the year an attempt was made to obtain from the generously inclined of the community a small sum to enable the School to pay off its debt and obtain quarters in the new medical building now being erected. A committee was formed to solicit subscriptions, consisting of the professors and instructors of the School. These men, who were already giving about one twelfth of their working hours to the School without compensation, found it impossible to take more of their time from their business, and impracticable to accomplish anything by evening calls; therefore this subscription has been practically dropped, and some other method must be adopted, if anything is to be accomplished in this direction. At the last meeting of the Alumni of the School, however, an attempt was made to interest the graduates of the School in the matter, and a paper was signed on the spot by thirteen of their number, agreeing to give to the fund one hundred dollars each in five years, or twenty dollars each year. This number has already been increased, and more will probably be added as their attention is called to the subject. If it were fairly understood by the community that not only a School of Dentistry, but a Dental Infirmary, averaging eight thousand cases each year, depended upon the gratuitous services of half a dozen men, any one or all of whom may at any moment grow weary of the burden imposed upon them, it does not seem that this condition of things would be allowed to continue.

THOMAS H. CHANDLER, *Dean.*

TO THE PRESIDENT OF THE UNIVERSITY:

SIR, — I have the honor to submit the following report upon the Lawrence Scientific School for the academic year 1880–81: —

The number of students registered during the year was forty-one. They were classified as follows: Four in Engineering, five in Natural History, one in Mathematics, thirty-one in special courses.

It would be difficult to state in detail all the courses of study pursued, without giving a complete tabular view; but its variety is shown in the fact that these pupils attended the instruction of fifty different teachers, — some of them attending only College courses. This year has shown also that more College undergraduates desire to make use of the advantages offered by the Scientific School; and, in view of the close connection which now exists between the School and the University, the question arises whether more courses of the School should not be included in the elective courses of the College. For instance, every year we have undergraduates receiving instruction in mechanical drawing. They take this work as an "extra," and, although it occupies their time, they get no credit for it in the scale of College marks. To the majority of graduates a knowledge of mechanical drawing would be of more use than the moderate skill in free-hand drawing which they are likely to attain. Yet the latter is accepted as an elective, while the former must be taken as an extra.

Last year we had seventeen pupils; this year we have nearly two and a half times as many. The principal if not the only cause for this increase seems to lie in the definite statement in the catalogue that persons could enter, without examination, as special pupils, and take any courses in the University for which they were found competent. But this sudden and great increase in the number of special students makes it a matter of interest to inquire into the kind of material of which this body of students is composed. A careful examination of the records shows that they may be fairly divided into the following classes: First, those who are unable or unwilling to prepare themselves for the entrance examinations, and yet are desirous of pursuing certain definite courses of study; secondly, those who cannot now pass all the entrance examinations, but will be able at the end of a year to pass those examinations, and also the annuals in many of the regular studies of the first year in the course selected, and thus enter as regular students; thirdly, those who wish to have some kind of connection with the University, but cannot enter as unmatriculated students of the College on account of the disqualification of age.

In the first class we find some of our most desirable pupils. They are persons who, for various reasons, have been out of the habit of study for years, and now find themselves in a condition to complete or supplement their earlier education. They come with a definite purpose, and they do good work. Many of this class also are graduates of other institutions, and come here to complete courses of study begun there. Some of them are finally advanced to regular standing, and take their degree in course, while others become candidates for the higher degrees.

In the second class we always have several pupils. Instead of spending a year in mere preparation for the entrance examinations, or to make up their deficiencies, they enter at once as special students, take private instruction if needed, elect many of the courses of the first year, and at the end of the year are admitted as regular pupils with advanced standing, with perhaps several conditions. In some respects this method of entrance is a gain both to the pupil and to the University. In his one year of probation he has become familiarized with the methods of teaching, and has learned to appreciate what he is losing in his position of special student. He wishes to get a degree, and he is ready to work for it. He is better qualified to select the department in which he will graduate, and he is better prepared for that department, than he would have been by one year's tuition outside of the University.

The third class contains those pupils with whom it is most difficult to deal. In the College, if a student does not come up to the required standard, he is dropped to a lower class; but these students are not classified in the Scientific School; and the only mode of dealing with a negligent student is to notify his parents that their son is wasting his time, and ask them to remove him from the University. It is understood that the College has recently done away with the restriction of age as regards unmatriculated students, and therefore the Scientific School will probably not be resorted to in future by this class of persons. They will naturally go to the College, and come under its discipline.

Two degrees were conferred at Commencement, — one in Engineering, and one in Natural History.

H. L. EUSTIS, *Dean.*

To the President of the University:

Sir, — As Director of the Botanic Garden, I have the honor to present the following report for the academic year 1880–81: —

The drought to which I referred in my last annual report was broken by abundant rains in the autumn. The damage caused by the drought to our biennials and perennials was materially lessened, as in case of the annuals, by the great watchfulness and care exercised by the gardener, Mr. Wm. Falconer, and most of the losses have been made good by plants newly raised from seed. It is feared, however, that some of the woody plants, especially our pines on Garden Street, have suffered irreparable injury. During the past year, rather more than the usual amount of rain has fallen, and the thrifty condition of our younger plants throughout the season has been gratifying.

Few changes in arrangement have been made, except in matters of detail. The space behind the gardener's house was largely given up to a collection of named grasses grown from seeds received from St. Petersburg, and from Lansing, Michigan. The seeds sent by Professor Beal, of the Agricultural College, Michigan, gave us excellent plants of our more desirable American species, and furnished a larger amount of material for demonstrations upon the grasses than we have heretofore had. Owing to improved facilities for raising plants from seed at the Garden, a greater number of individual plants of the same species has been grown during the year, to the manifest advantage of the students and instructors.

The perplexing question of properly labelling our plants with durable tickets of some sort has again pressed itself upon our attention. A large proportion of the labels, both in the houses and the open air, are now practically worthless, owing to their illegibility. An attempt, in part, but not wholly successful, has been made to replace some of the smaller painted labels formerly in use by tickets made of thin brass, in which the name is deeply cut by stencil dies. Such labels are not available, however, for our larger plants. The value of a botanic garden depends so largely upon the accuracy and thoroughness with which its plants are named, that no pains will be spared in the endeavor to secure durable labels. In the Garden at Copenhagen the labels are made of white glazed porcelain, upon which the name is enamelled in black under heat, and the lettering is practically indestructible. After an exposure of seven years in the open air such labels are found to have undergone no change. The porcelain tablets are securely fastened to iron rods of considerable length. Owing to the depth to which the rod reaches, the labels have not been misplaced by workmen, while by their complete legibility and durability they appear to satisfy every reasonable requirement. Of course, the first cost of durable labels is high; but a true economy demands that we should speedily replace our decaying and fading ones by some which will not require to be themselves replaced for many years. It is the purpose of the Director to make trial of a number of the porcelain labels, as well as of those of other kinds, in order that a good and uniform system can be established.

Among the more important accessions to our Garden should be first mentioned the Mexican plants obtained by a grant to Dr. Edward Palmer, the explorer. The specimens have proved generally satisfactory, and have furnished a good basis for advantageous exchanges. From St. Petersburg, and from Kew, seeds and valuable collections of living plants, for the most part in a healthy state, have been received in exchange. It is gratifying to be able to report that many of the rare plants desired in exchange by the Director of the Garden at St. Petersburg were received by him in good condition. The present system of exchanges by which real desiderata are used has been found to work well. Of course the system diminishes the number of plants which might change hands, but it reduces likewise the risk of sending unwelcome freight, and of receiving plants which are not wanted, but for which it would be ungracious not to return thanks. The system of exchanges, now well established upon a small scale, is in a fair way to grow, and to the mutual advantage of the Garden and its correspondents.

It is a pleasure to announce that the Garden has obtained during the year several desirable plants by gift. From Mr. Balch, of Salem, a valuable liliaceous plant and several orchids; from Mr. Henry L. Pierce, of Boston, a fine specimen of the chocolate plant; from Mr. J. F. Le Moyne, of Chicago, a good collection of native Orchidaceae have been received and acknowledged. Moreover, from several of the private greenhouses in the vicinity of Cambridge excellent plants have been obtained in exchange. Mr. C. E. Perkins, of Somerville, who has made himself well acquainted with our local flora, has placed the Garden under obligations by an extensive and carefully named collection of seeds of our native plants.

The greenhouses have undergone no important changes during the year, except in the case of the heating apparatus in the older range. It had been felt for some time that risk was incurred by having to depend, during the coldest weather, upon a single boiler, but the way had not seemed clear to purchase additional heating apparatus. H. H. Hunnewell, Esq., a member of the Garden Committee, authorized the Director, early in the year, to procure a second boiler and have it connected with the present system of pipes at his expense. A suitable boiler was at once obtained and placed in working order, so that it can be employed either with or without the older one. This gift has been found of the greatest use. The apparatus has been thoroughly tested under severe conditions, and has proved in a high degree satisfactory. The Garden is not now in great danger of losing its collection of exotics by frost. Although the plants in our greenhouses are by no means so rare that they could not be replaced, the collection is far too good to be exposed to any risk which we can avoid.

THE HERBARIUM AND THE HERBARIUM LIBRARY. — Mr. Sereno Watson, the Curator of the Herbarium, makes the following report: —

"The accessions to the Herbarium during the past year have been considerable. Of plants from within the United States, about 2,750 specimens have been received from various sources, including 309 from the Atlantic States, 360 from Texas and Arkansas, 417 from New Mexico and Arizona, 823 from California, 580 from Oregon and Washington Territory, and 261 from the northern interior region. From British America there has been received a set of Professor J. Macoun's collections in the northern plains and Rocky Mountains; from Mexico, the valuable collections of Dr. E. Palmer (about 1,400 specimens), and of Drs. Schaffner and Bilimek; and from the West Indies, a set of Baron Eggers's collections in St. Thomas and Dominica, of A. Fendler's Trinidad ferns, and of Dr. A. H. Garber's Porto Rico plants, in all 820 specimens. Of foreign plants, a set of the grasses of the Wilkes Exploring Expedition (205 specimens) has been presented by the Smithsonian Institution, eight packages of miscellaneous collections by the Musée d'Histoire Naturelle, and eleven packages by Dr. E. Cosson, of Paris.

"Since my return to Cambridge in January my time has been fully occupied in the care of these collections and in other duties connected with the Herbarium. Nearly all of the United States specimens have been examined, determined, and reported upon to the collectors; 2,260 specimens have been poisoned, mounted, and arranged in their places in the cases; and the distribution into sets of Dr. Palmer's entire Mexican collection was overseen, in which great assistance was received from Mr. H. C. Jones. As a result of these examinations over fifty new species and two new genera have been added to the flora of North America.

"Continual care has been required to save the mounted collections of the Herbarium from the injury to which they are more or less exposed from insects and dampness. In the present condition of the Herbarium building and cases this is a serious danger which it seems to be impossible to escape.

"The accessions to the library of the Herbarium amount to about 130 volumes, besides a considerably larger number of pamphlets. These have all been catalogued and duly shelved."

From the Museum at Kew the Garden has received another large and very interesting collection of specimens illustrating the uses of plants. At present we have absolutely no room in which these and our other specimens can be displayed to good advantage. The cases are so thickly crowded that no place can be found for the new specimens which are needed for demonstration; and hence our most recent acquisitions have not yet been removed from the packing boxes, except for lecture purposes. The Director has to acknowledge, in behalf of the Garden, the receipt, from Dr. E. Lewis Sturtevant, of a unique collection of specimens illustrating the different varieties of Indian corn. The carefully labelled specimens, about 350 in number, and exhibiting about 300 different forms, are at present in the packing cases. Numerous smaller gifts to the Museum have been acknowledged by correspondence and by the labels attached to the specimens.

The usual instruction in Botany has been given at the Garden, and, with two exceptions, by the instructors previously reported. The courses of lectures by the Director were suddenly broken off by severe illness in his family, and the instruction was subsequently undertaken by the Assistant in Botany, Mr. Robert W. Greenleaf, who completed the course of practical work in a perfectly satisfactory manner.

The summer course in Botany was given by Professor D. P. Penhallow, who will probably assume charge of the instruction in the same course in 1882. The lectures were attended by a smaller number than usual, but the work done by the students compared favorably with that in any previous summer course. In the opinion of the Director, the summer course in Botany, unless it can be made in some way equivalent to a College elective, and can be made a substitute therefor, should be given by some one who has not given College instruction during the year, or else the course should be relinquished.

The Garden has furnished abundant material for the electives in Botany and in Biology. It has also afforded an opportunity for the prosecution of experiments upon living plants. During the year experiments in Vegetable Physiology have been carried on in the laboratory and the open air, chiefly by Professor Penhallow, who, with the slender means placed at his disposal, has been able to accomplish much satisfactory work. The nature and the results of the experiments upon root-and-stem pressure, and the observations upon their atmospheric relations, have been elsewhere reported. It is hoped that larger means may soon be available for similar researches in the Garden.

The interruption of work on the part of the Director rendered it necessary to suspend further efforts to augment the Garden fund. The amount already secured is, however, a very substantial addition to our working capital. This increase is most largely due to the influence and to the personal efforts of Mr. Alexander Agassiz, Mr. Augustus Lowell, and Miss K. P. Loring. The reasons for increasing the fund to the full amount of $80,000 have been urged in the last annual report, and in the report of the Garden Committee. It is believed that those reasons still hold good.

The Garden has received during the year the following gifts of money for present use. The amount first mentioned was expended, as already stated, for a new boiler and for the cost of setting it in place.

H. H. Hunnewell	$500
Henry L. Pierce	100
John Amory Lowell	1,000

These timely additions to our resources are most gratefully acknowledged.

GEORGE LINCOLN GOODALE, *Director.*

To the President of the University:

Sir, — I respectfully submit the following report upon the Bussey Institution for the year 1880–81: —

Six students were enrolled during the year, all of them in regular standing; and the degree of Bachelor of Agricultural Science was conferred at Commencement upon three candidates.

Courses of lectures and recitations on Agriculture, Horticulture, Agricultural Zoölogy, Agricultural Chemistry, Botany, Entomology, and Histology were given by Messrs. Motley, B. M. Watson, Slade, Storer, C. E. Faxon, Burgess, and Ford. Each of these courses occupied the entire academic year, with the exceptions that the lessons in Agriculture were somewhat broken in upon by the illness of the instructor, and that the course in Entomology was given in the second half-year, as it is usually.

It is worthy of remark that students of the Bussey Institution are beginning to obtain places as laborers upon farms in the vicinity during the summer vacation, and that such situations can be found without difficulty for promising persons.

No changes of importance have been made in the material equipment of the School, with the exception of somewhat extensive repairs of the greenhouses, which, as was intimated in a previous report, had fallen into serious decay during the term of years in which they were used by the Arnold Arboretum.

The library of the Institution is indebted to Mrs. Sewell Tappan, of Boston, for a valuable gift of dictionaries of various languages and a number of other standard works.

F. H. STORER, *Dean.*

TO THE PRESIDENT OF THE UNIVERSITY:

SIR, — I have the honor to submit the following report upon the condition and progress of the Arnold Arboretum during the year ending August 31, 1881: —

No progress has been made during the year in permanently arranging or planting the Arboretum. This work has again been delayed by the failure of the Government of the City of Boston to adopt the recommendation of its Park Commissioners for a joint occupancy of the Arboretum by the College and the City, on the plan suggested by Mr. Fred L. Olmsted. While action in this matter has not been reached by the City Government, the expressions of public opinion in favor of the scheme have been so strong and so frequent, and the popular interest in the Arboretum and in those branches of rural economy which it is intended to foster and develop has everywhere so increased, that it has not seemed wise to plant any portion of the collections, in view of the fact that the proposed plan, if carried into execution, must necessitate an entirely different arrangement of grounds and plantations.

As I pointed out a year ago, the permanent planting of a large number of trees specially raised for the Arboretum cannot be safely delayed much longer without serious loss; and unless the City is prepared to take definite action in the matter, some method for carrying out the provisions of Mr. Arnold's bequest should be devised without reference to the enjoyment or use of the Arboretum by the public.

The nurseries have been remodelled and replanted during the year, and several important and interesting additions have been made to the number of plants now cultivated, although, owing to the crowded condition of the nursery grounds, no special effort has been made to increase these collections. When the older nursery plants can be permanently provided for in the Arboretum proper, the number of species and varieties cultivated can be immediately and at slight expense nearly doubled.

The nurseries are in excellent condition, and contain large numbers of rare plants, many now introduced into cultivation for the first time.

The interchange of plants and seeds with other botanical and horticultural establishments has been continued through the year. There have been 4,834 plants and 477 packets of seeds distributed as follows: to all parts of the United States, 4,584 plants and 131 packets of seeds; to Great Britain, 13 plants and 106 packets of seeds; to the Continent of Europe, 37 plants and 187 packets of seeds; to St. Helena, 200 plants; to Japan, 52 packets of seeds.

There have been contributed during the year 2,625 plants and 310 packets of seeds from 38 donors.

HERBARIUM AND MUSEUM.

If the living collection has not gained during the year, the Herbarium and Museum have made substantial progress. The Herbarium is rich in North American species, especially in *Coniferae*, Oaks, and other arborescent genera represented by specimens largely collected by the Director and his associates in various journeys undertaken during the past two years for the purpose of studying the forests and the forest resources of the United States.

The Museum now contains an almost complete set of the woods, barks, fruits, and other products of the American forests; and is rich in sets of woods of the trees of Europe, Algeria, India, Australia, and other countries, received in exchange from the Royal Gardens, Kew.

The Museum and Herbarium still find temporary accommodation in the "Dwight House," Brookline, lent by Mr. Ignatius Sargent for the purpose. The detailed account of the operations in these departments will be found in the report of Mr. John Robinson, Assistant in charge, in the Appendix (IV.).

C. S. SARGENT, *Director.*

To THE PRESIDENT OF THE UNIVERSITY:

SIR, — In my last report I expressed a wish that the Bulletin of the Library might be expanded into a Bulletin of the University. This has been done. Several friends came forward with a promise to supplement for five years the appropriation of the Corporation. We owe this help to Messrs. Charles P. Curtis, William B. Weeden, Henry Lee, Alexander Agassiz, and Charles S. Sargent. The change in the publication took place April 1, 1881, when the HARVARD UNIVERSITY BULLETIN, No. 18 (keeping up the numerical sequence begun with the Library Bulletin), appeared. The new features in the two numbers published during the year have been the following: —

Records of the Corporation and Overseers; an enumeration of current gifts to the University; notices and papers on literature, science, and art; book reviews, and notices and announcements of work done and intended. The old features of the Library Bulletin have been retained.

Two new *Bibliographical Contributions* have been issued during the year, namely, —

1. *Halliwelliana: a Bibliography of the Publications of James Orchard Halliwell-Phillipps*, which has been prepared by the Librarian, with the assistance of Miss Annie E. Hutchins, of the Library staff. It shows the extraordinary number of three hundred and forty separate publications, extending over an interval of forty-four years, during five of which no publication could be discovered. The proofs were submitted to Mr. Halliwell-Phillipps, and to an assiduous collector of his publications, Mr. Samuel Timmins, of Birmingham, England; and it is hoped that these precautions have served to make the list as complete as possible. The publications of Mr. Halliwell-Phillipps are rich in antiquarian lore, and are chiefly illustrative of early English, and particularly of Shakespearian, literature. Many of them are of few pages each; but as most have been issued in very small editions, it has become more necessary that their existence should be chronicled in such way as is now done. To aid students, an indication of the principal libraries in this neighborhood possessing the books is added to the title of each.

2. *A List of the Publications of Harvard University and its Officers*, which has likewise been arranged by the Librarian, with

the assistance of Mr. C. S. Bowen. It contains the publications of the University, or of any of its departments, for a period of ten years (1870–1880), and such papers or books as were published by its officers during their connection with the University, so far as that connection falls within these ten years. It was undertaken by direction of the President, and shows what has been, during this interval, the University's activity in science and literature, either as a body or through the individual efforts of its staff.

Mr. Arnold reports upon the progress of the rearrangement of the books in Gore Hall, as follows: —

"The number of volumes now in place in the new stack is 65,970; the number added to the permanent classification during the year is 13,010. The comparative smallness of the latter number is simply accidental, and does not fairly represent the work of the year, since about ten thousand volumes of Greek and Latin classics have been brought together and partially arranged, but are not ready to appear in this year's report.

"Most of the works arranged during the year are included in the three classes of English Literature (from the French Revolution to the present time), Language, and Classical Philology. Language includes all works on grammar and lexicography, and the languages are arranged by families. The general order is as follows: Science of language, Indo-European comparative grammar, Monosyllabic and Agglutinating languages, Hamitic, Semitic, and Indo-European families. In the department of Classical philology, only the works on Greek and Roman history and antiquities and the periodicals are in their final position.

"The number of volumes in each class is as follows: —

	Vols.
English Literature (since 1779)	3,150
Language	5,082
Classical Philology	1,732
Added to classes previously arranged	3,046

"During the year 1,001 volumes have been transferred to this Library from that of the Divinity School. Many of these have already received their place in the new classification. The work of classifying the pamphlets has been carried on, and a considerable number have been bound into volumes.

"After the work of one more year in rearranging, the question of room will become a serious one. So much space is now occupied in the new stack by works which must find their ultimate position in the old building, that it will not be possible to continue the work of rearranging in the new stack much longer than another year without some other provision for such works than now exists."

The accessions to the University Library for the year, and the present extent of the various departments, are as follows: —

Departments.	Volumes added.	Present extent in	
		Volumes.	Pamphlets.
Gore Hall (College Library)	7,878	195,178	194,196
Law School	600	19,609	2,777
Scientific School	27	2.346	200
Divinity School	102	16,252	1,609
Medical School	9	2,009	....
Museum of Zoölogy	711	14.835	8,914
Astronomical Observatory	81	2,753	5,195
Botanic Garden	132	3,232	1,460
Bussey Institution	192	2,392	842
Peabody Museum	77	502	647
Totals	9,804	259,103	215,840

Of the accessions to the Gore Hall collection, there were added by gift 2,068 volumes and 13,656 pamphlets; and such accessions also include 1,001 volumes transferred from the library of the Divinity School, which is diminished by as much, in addition to a reduction shown by an absolute count, recently made.

In December, 1880, I was requested to give to the Corporation the outline of a plan for further unifying the work of the several libraries of the University, and on the 13th of that month the President and Fellows sent the following notice to all departments of the University Library, and also to the several academic departments, which have small class-room reference collections: —

> "1. No book shall hereafter be purchased by any department of the University, except the Law School, out of appropriations or otherwise, unless through the Librarian of the University, who shall from time to time prescribe the form for ordering purchases, and rendering account for the same.
>
> "2. All books hereafter acquired by any department of the University by purchase or gift shall be sent to the College Library, where they shall be catalogued and have the stamp and book-plate of the University put upon them before they are sent to the library of the department."

Accordingly, the purchasing and cataloguing of books for all departments of the University have been done at the College Library during the greater part of the year, excepting that the cataloguing only has been done for the Law School. The plan has secured uniformity of ordering and payment; has made it possible to prevent needless duplication of books in the several departments; has diminished in some cases the cost of the books; has provided for a uniform system of cataloguing; and has resulted in making during this interval the catalogue in Gore Hall the index to all departments of the University Library.

The President and Librarian, authorized by the Corporation, have begun the remodelling of the old part of Gore Hall, by the conversion of what was a low, damp, and dimly lighted cellar, under that part, to a well-lighted, dry, and commodious apartment, for the storing of newspapers and duplicates, and for other possible uses. By excavating about a foot and a half of earth, an additional height has been gained under the brick vaulting; the windows have been cut down and provided with well-drained areas without, and a drain has also been extended about the main walls. The collection of bound newspapers already occupies a running space of four hundred feet, and the accommodation for them in the other parts of the Library was inadequate and inconvenient.

The preparation of references for themes, forensics, and oral discussions has been continued.

The following table shows the use of books at Gore Hall, as compared with the last two years:—

	1878–79.	1879–80.	1880–81.
1. Books lent out	41,296	41,986	45,481
2. Used in the building	10,921	7,812	11,724
3. Overnight use of reserved books	7,519	10,506	11,872
Total (excluding No. 3, which is included in No. 1)	52,217	49,798	57,205
Cards giving to students temporary admission to the shelves	....	60	85
Times of use	....	840	870
Officers of instruction reserving books . . .	....	35	38
Number of books reserved	....	3,330	3,418

The 85 students using admission cards have been in these departments: History, 31; Science, 14; Art (including music), 12; Literature, 12; Greek and Latin authors, 5; Philosophy, 5; Theology, 4; and Political Economy, 2.

On Sunday, Oct. 3, 1880, and thereafter on Sundays, the library in Gore Hall was kept open for the use of such members of the University as desired to use the books in the building only. For 37 Sundays (till the long vacation came) 1,846 persons availed themselves of this opportunity, an average of 47 each Sunday. The hours were from one to five o'clock. The highest number on any one day was 64.

The work of the catalogue department is indicated by the following table: —

Cards of the Public Catalogue.	1878-79.	1879-80.	1880-81.
1. Put in place	36,390	35,815	41,215
2. Prepared	20,595	24,887	25,705
3. Having shelf-numbers altered (*estimate*) . .	....	....	75,000
Totals (excluding No. 2, already counted in No. 1)	....	....	116,215

These figures are instructive as indicating the great chance for disarrangement of the cards, incident to the ordinary work of the Library. It appears for the past year that beside the 25,705 cards put in the drawers for the first time, there were 15,510 cards returned to the drawers, after being taken out for additions, corrections, verification, or for other reasons. The shelf-department also removes about 75,000 cards a year for the purpose of affixing the new shelf-marks. Thus we may say 116,215 cards have been inserted or reinserted during the year; or, in other words, probably more than one tenth of the catalogue has been thus handled; and it is hardly possible to do this without causing more or less misplacement.

Mr. Scudder furnishes the following statement regarding the subject catalogue: —

"The revision of the primary subjects under which the cards are arranged has proceeded as fast as practicable, and is now about half completed. Of the 650 general headings in the catalogue at the beginning of the year, 152 have been changed or are undergoing change, 198 have been discussed and left as they were, leaving 300 still to be supervised. As, however, the principles involving all changes have been settled in the work already done, the concluding part will be carried forward with much greater rapidity. The changes which have been made have, in each case, involved the alteration of from one to fifty or a hundred cards in the subject catalogue, as well as of an equivalent number in the author's catalogue, each of which must be separately found, marked, and replaced.

"The aim has been to make the catalogue as consistent and uniform as possible with the least number of alterations and with a view also to future accessions. Some classes of subjects bidding fair to increase indefinitely in the future and thus seriously to disturb the contemplated numerical notation have been grouped under primary heads, where their multiplication cannot become a source of anxiety. No changes, however, have been made which are not in themselves, apart from the question of notation, desirable. Thus, the various bodies of *Literature*, as Arabic, Bengali, Cornish, &c., formerly scattered through the alphabet in more than eighty places, are now brought under that one head into a single drawer. So, too, different forms of machines have been made "Sections" of *Machinery*, instead of standing each in an independent position in the catalogue; and numerous changes of a similar nature have been introduced."

In March was issued the first number of *The Harvard University Calendar*, and it has been continued weekly, with an intermission of the long vacation. It aims to give under each day of the week, and sometimes in advance of the week, to the University Staff and students announcements which do not make a part of the regular Tabular Views or programmes; and to become a medium of notice to residents of Cambridge concerning all lectures and exhibitions in which they may have an interest.

Among the most interesting gifts of the year has been the collection of books relating to Frederick the Great and Cromwell, used by Thomas Carlyle in writing his books on those characters, and bequeathed by him to this Library. They have been safely received, and number 418 volumes. Very many of them are more or less enriched with his annotations. The correspondence and other documents relating to the bequest are printed in the *University Bulletin*, No. 18, p. 166.

Professor Norton promptly took occasion to place with these books an interesting memorial of Cromwell, which had formerly been in Carlyle's library, namely, a cast from the mask of Cromwell's face, taken after death. Mr. Norton had received it some years ago as a gift from Carlyle.

JUSTIN WINSOR, *Librarian.*

TO THE PRESIDENT OF THE UNIVERSITY:

SIR, — The present condition of the Harvard College Observatory furnishes a test of an opinion expressed in some of its recent annual reports, namely, that any addition to the resources of a scientific institution already supplied with the funds needed to keep it in working order will prove an advantageous investment. Such a sum is directly applicable to the extension of scientific inquiry. A similar gift to establish a new institution, or to support a feeble one, will be largely consumed in the mere preparation for such inquiry, and the head of the institution must spend much of his time in routine work, even if he is not required to devote a large part of his energies to teaching, as well as to research.

The proper division of labor, and the continuous use of apparatus, are advantages as important in science as in the arts. These advantages are possessed by a liberally endowed observatory as they are by the factory of a rich proprietor, who can afford any immediate expense required to secure the most abundant returns. It seldom happens that the endowment permits the use of the instruments to their full capacity. Until this point is reached, great results may always be expected from a slight increase of income.

The subscription raised in 1878 for the support of the Observatory for five years has given it for that time a much improved position for conducting researches. Many of the contributors to the fund paid their subscriptions in full at the outset, and the Observatory thus acquired a large balance to the credit of its account with the University, which will of course progressively diminish until the five years have expired.

One of the most important advantages resulting to the Observatory from this temporary enlargement of its resources consists in the increased number of its assistants, which is now sufficient to allow the work of each to be more advantageously directed than was previously possible.

The observations with the large equatorial and meridian photometer are made by Mr. Searle, Mr. Wendell, and myself. Messrs. Cutler and Eaton assist in recording these observations and in their reduction. Miss Farrar and Mrs. Fleming also take part in the reductions. The meridian circle remains in the charge of Professor Rogers, who is aided in the observations by Mr. Brown, and in their reduction also by Mrs. Rogers and by Misses Saunders, Bond, and Winlock. The time-signals are in charge of Mr. Edmands, assisted by Mr. Chandler. These gentlemen and Mr. Howard are making the naked-eye observations of northern stars. The meteorological observations are ordinarily made by Mr. Searle, who also has charge of the accounts, correspondence, &c., and has devoted much time to work connected with the revision and publication of the equatorial observations. The compilation of the bibliography of the variable stars, and the computation of cometary orbits as noted below, are conducted by Mr. Chandler.

Three instruments, the equatorial, meridian circle, and meridian photometer, have been kept actively at work during the past year. The last of these instruments has proved so satisfactory that a large one is being constructed to carry on observations of stars too faint for the present instrument. The new photometer will have object-glasses four inches in diameter, and will be capable of measuring any star brighter than the tenth magnitude. It is expected that such measurements will form a part of the permanent routine work of the Observatory. The relation of a meridian photometer to other photometers resembles that of a transit instrument to a sextant. There are the same advantages of rapidity, ease of reduction, and probably of precision. On the completion of the new photometer we shall have the same advantages for measuring the light of any star that an observer would of finding its position if he possessed the only transit instrument in existence. It is hoped that the use of this instrument will become more general when its advantages are appreciated. I understand that a distinguished German astronomer is planning a photometer for similar work, and at his request a description of the instrument used here has been forwarded to him.

The work of these various instruments will now be considered. That of the large telescope may be classified as below, with reference to the principal objects observed.

Eclipses of Jupiter's Satellites. — One hundred and fifty-three of these eclipses have been observed photometrically, sixty-four during the past year. One improvement has been introduced by which the number of settings may be nearly doubled. A single observer can make but three settings a minute, or one in twenty seconds. With an assistant to record, the time is reduced to about nine seconds. This time has been reduced to five seconds by the employment of two assistants, one of whom reads the photometer circle, while the other records and observes the time by the chronometer. As the observer does not remove his eye from the eye-piece, it is probable that the accuracy of the observations will be increased, and the satellite followed nearer to the point of disappearance.

Objects having Singular Spectra. — The search for these objects has been much interrupted by the pressure of other work. Only perfectly clear nights when the moon is absent are available, and these rarely occur at certain seasons of the year. The general survey of the heavens with a telescope of four inches aperture has been completed from twenty to twelve hours of right ascension. The observations during the summer on the remaining eight hours were so much interrupted by the long twilight and other causes that it was deemed best to reserve this work for another season. The most important result of this search has been the discovery of the peculiar spectrum of the star Ll. 13412. Three bright lines were found having wave-lengths of 545, 486, and 466 millionths of a millimeter. The second of these lines probably coincides with the F line of hydrogen. The other two were unexplained until Dr. Konkoly, in "The Observatory," IV. 257, described the spectrum of Comet 1881 III. (the Great Comet), as containing the five lines 560, 545, 515, 472, and 468. Three of these, the first, third, and fourth, are the usual cometary lines; the other two appear to be coincident with the lines of Ll. 13412. Accordingly, while other comets have a spectrum identical with that of the stars of Secchi's fourth type, and apparently largely composed of carbon, this comet contains a substance as yet unknown, which one star only is as yet known to contain. The bright-line stars in *Cygnus* and in *Sagittarius* also give the line 467, but differ in the position of the other lines.

Another interesting discovery is that the star *L*^{2}*Puppis* has a banded spectrum. This star is more than forty-four degrees south of the equator, and at the time of observation was less than two degrees above the horizon.

Two stars were found, one in *Puppis*, the other in *Ursa Minor*, which from their color and spectrum were at once thought to be variables of long period. These predictions were verified by observation, and a very rapid method of discovering variable stars is thus suggested. An announcement of the last of these discoveries was telegraphed to the Astronomische Gesellschaft as an example of the cipher code referred to below.

The spectra of all the stars north of —40°, marked as red or colored in the Uranometria Argentina, have been examined in the large telescope. In most of them no peculiarity of spectrum could be detected. From the remainder, and from some miscellaneous sweeping for such objects, a list of about eighty stars having banded spectra has been compiled and published.

Variable Stars. — The photometric study of the stars β *Persei* and DM. 81° 25, proposed in my last report, has been carried out. The number of comparisons made of β and ω *Persei* was 2,748, six hundred during a single night. On this occasion the observations were continued almost without intermission from a quarter of seven in the evening to half past three in the morning. In like manner, 3,276 comparisons of DM. 81° 25 and 26 were made on five evenings. Nine hundred settings were obtained during one night. The probable error of a single minimum determined in this way is only about 1.3 minutes.

Comets. — This Observatory has taken an important part in the early distribution of circulars relating to the comets recently discovered, by defraying the cost of telegrams, and by furnishing the necessary observations and computations. In co-operation with the Dun Echt Observatory and the Science Observer, circulars have been distributed in Europe and America, giving an early announcement of the elements and ephemerides of the five new comets discovered in the first ten months of 1881. The average interval between the time of announcement of the comet and the issue of the circular has been less than a week. The interval between the last of the observations needed to determine the orbit and the time of telegraphing the elements to Europe has been less than two days. The computations have been generally made by Mr. Chandler, who has not hesitated, whenever necessary, to continue them through the entire night. No important error has occurred in their telegraphic transmission to Europe, by means of the ingenious cipher code devised by Messrs. Chandler and Ritchie. These preliminary orbits proved sufficiently accurate for the purpose for which they were intended. That of the Great Comet of the year (Comet 1881 III.), was published within four days of the first appearance of the comet in the northern heavens, and agreed more nearly with observation than any other published elsewhere for some time. This agreement was due to the use of an early observation made at Rio. Barnard's Comet was not found in Europe until the publication of the ephemeris computed here. Denning's Comet was early suspected by Mr. Chandler to be periodic. Elliptic elements were computed by him; but a later mail showed that he had been preceded by Dr. Schulhof of Paris in this work.

The use of the large telescope in the observation of comets has not, in general, been allowed to interfere with the other work of this instrument, except when early observations were needed for the determination of their obits. Almost all of the observations were made by Mr. Wendell, many of them late in the night, when the telescope was not otherwise occupied. Comet 1880 IV. was observed on twenty-nine nights; Comet 1881 II., on two; Comet 1881 III., on forty-three; Comet 1881 IV., on fifteen; Barnard's Comet, 1881, on ten; and Denning's Comet, 1881, on eight.

Some miscellaneous measurements have also been made of these comets, particularly of Comet 1881 III. The form of this comet's tail was measured, and the brightness of portions of it at various distances from the head.

Meridian Circle. — During the past year observations have been made on 250 days. This number is distributed by months as follows: —

	Month.	No. Days.		Month.	No. Days.
1880.	November . . .	26	1881.	May	20
1880.	December . . .	21	"	June	18
1881.	January	24	"	July	22
"	February . . .	18	"	August	12
"	March	17	"	September . . .	23
"	April	24	"	October	25

The whole number of observations made during the past year is as follows: —

		No. Obs.	Total No. Obs.
Polaris.	Upper Culmination	122 . . .	
Polaris.	Lower Culmination	110 . . .	232
Sun.	Vernal Equinox	31 . . .	
	Autumnal Equinox	45 . . .	
	North Solstice	13 . . .	
	South Solstice	15 . . .	158
	Fundamental Stars		1999
Polar Stars.	Upper Culmination	293 . . .	
	Lower Culmination	170 . . .	463
Miscellaneous			350

The observations for the determination of the horizontal flexure by means of the collimators have been continued throughout the entire year as often as the atmospheric conditions have been favorable. The whole number of observations is fifty-eight. It was stated in the last report that the horizontal flexure for January of any year had been found to be about 0″.6 greater than for July of the same year. Since that time the values of this function derived from the fundamental stars observed have been computed for the years 1876 and 1877. We have now, therefore, sufficient data to determine the reality of this apparent variation. The values given below represent the difference between the value of the correction described as horizontal flexure for the mean of the months of January and December of any year and for the month of July of the same year both from the fundamental stars and from the collimators.

From the Fundamental Stars.		From the Collimators.	
	$\frac{\text{Jan.}+\text{Dec.}}{2}-\text{July}\ \Delta\ \text{R}_4.$ ″		Jan. — July Δ R₄. ″
1872	+0.64	1879	+0.73
1873	+0.39	1880	+0.56
1874	+1.09	1881	+0.48
1875	+0.73		
1876	+0.14		
1877	+0.71		
1878	+0.62		
Means	+0.62		+0.59

The action of temperature upon the screws by which the two halves of the tube of the telescope are joined to the cube of the circle is suggested as the probable cause of this difference. Observations with the long collimator for the determination of the variation of the instrumental constants of the instrument have been continued throughout the year. For the most part there are two series during each day on which stars have been observed. During the autumn and winter, the image of the concentric rings, or the focus of the collimator, remains remarkably steady; but during the summer, it has been found necessary to limit the observations to the evening and to the early morning hours. As a further check upon the variability of the index-error of the circle, some experiments were made with the reserve level of the Russian transit; this method, however, proved unsatisfactory. A level of the form invented by Mr. John Clark was ordered of Fauth

& Co., and was mounted upon the cube of the telescope in May. The use of this instrument has been limited to the determination of the variability of the level of the telescope and of the index-error of the circle. A definitive opinion of the value of this method of detecting changes in the position of the zero of the circle must be deferred till the value of the index-error has been derived from the observations of Polaris. According to present indications the level gives somewhat better results than the long collimator. At present the observations are arranged for the detection of changes occurring between the morning and evening hours.

A decided improvement in the performance of the Standard Clock, Frodsham No. 1327, has been maintained since its removal to the cellar of the building, as is shown below in the account of the Time Service. The extreme variation of the thermometer placed within the room and read through a glass window from the outside has been 8°. Comparisons of this clock with the mean-time clock at Waltham have been continued as before by means of the line of telegraph erected for the purpose.

The investigation of the errors of the fixed circle of the telescope for each degree was completed in August. A metal plate having an arc of 15° subdivided to 5′ was used for the investigation. It was attached to the frame which carries the microscopes opposite the circle to be examined. The frame proved to be capable of revolution with no sensible disturbance of the focus of the microscopes. Each 15° of the fixed circle was compared with the constant arc upon the plate. Two series, one in May and the other in August, show a good agreement. The maximum error of any space was found to be about 1″.4, and the accumulated systematic error for 180° does not exceed 1″.3. The errors of the single degrees were found by comparing each degree with the first degree of the metal plate. From the provisional reductions it appears that the accidental errors of division rarely reach 1″ and that with two or three exceptions they never exceed 1″.3. The investigation is to be completed by an examination of each space of 5′.

Observations of certain stars were made at the request of Professor Davidson of the United States Coast Survey, of Professor Hall of the Naval Observatory, and of Captain Tupman of the Greenwich Observatory. Two observations were made of Comet

1881 III., and a special series of 280 observations was made for the purpose of ascertaining whether the telescope moves in a vertical plane during its revolution.

The chronograph sheets for 1880–81 have been read off to July of the current year. Since the last report, considerable progress has been made in the reduction of the zone observations. In the preliminary reductions of the fundamental stars, the observations of a few stars were found to indicate persistently a disagreement with the fundamental positions of Publication XIV.

By comparing the separate values of $(\Delta T+m)$ and of the equator-point correction for each date with the mean values of these functions for the same date, a list of stars showing substantially the same discordances from year to year was made out. From this list twelve stars in right ascension and forty stars in declination were selected for special examination. A list of the resulting corrections to the positions in Publication XIV. was submitted to Professor Auwers, with a request for instructions in regard to the proper course to be pursued in this case. He has subsequently authorized, on behalf of the Council of the Astronomische Gesellschaft, the use of the provisional corrections already found. The actual determination of the definitive values of $(\Delta T+m)$ and of the equator-point correction has been unavoidably delayed by this inquiry.

The right ascension constants have now been determined for the entire series from 1870 to 1879, and the declination constants have also been found for the same time, except for the year 1871–72. The computation for this interval is nearly completed.

The entire number of dates, for which the constants have been determined, is 1,263. The tabular reductions to apparent place and the refractions have been completed for the entire series of zone observations. The reductions have been made for intervals of twenty minutes in right ascension and two degrees in declination. The whole number of days for which these computations have been made is 633, and the number of individual reductions is about 12,000.

Meridian Photometer. — The work originally proposed for this instrument of measuring on three nights the light of each of the naked-eye stars visible in this latitude was essentially completed August 25, 1881. The observations will be continued during another year, as the necessary delay for reduction and publication will not thereby be greatly increased. Of the four thousand stars in our catalogue, about fifteen hundred have been selected for re-observation on three nights each. We shall thus obtain at least six observations of these stars, which include all those brighter than the fourth magnitude, all those used in the principal nautical almanacs as standards, and all those of which the first measures proved discordant. About seventy-six thousand measures have been made in all; thirty-six thousand since November 1, 1880.

From a discussion of the upper and lower culminations of a hundred circumpolar stars, the law of atmospheric absorption has been deduced, and the corresponding correction for each of the stars observed determined. All the readings have been reduced to magnitudes, corrected for the difference in transparency of the prisms, the mean taken when the stars are completed, the residuals derived, and the probable error deduced. This work has also been in a great measure checked and entered in the sheets of copy ready for publication.

A comparison of the photometric observations with those made by the naked eye is much to be desired. The Uranometria Argentina furnishes the means of doing this with the southern stars, but extends only to 10° north. Accordingly, all the stars in the Atlas Coelestis Novus of Heis north of the equator, and brighter than the sixth magnitude inclusive, are being measured by the eye, aided, when necessary, by an opera-glass. Each star is to be measured by three observers, who are to compare it with two stars in the vicinity of the pole, one being a little brighter, the other a little fainter. The interval between the two is supposed to be divided into ten parts, and the brightness of the star to be measured is estimated in terms of this interval. The standard stars, one hundred and fifty-seven in number, include all stars brighter than the second magnitude, and those between 60° and 75° north, which are used in determining the atmospheric absorption. The total number of comparisons required for this work is about nine thousand, of which nearly a quarter have already been made.

Time-Signals. — The distribution of time-signals continued in charge of Mr. F. Waldo until June 1, and since then Mr. Edmands has assumed their care. Special attention is now given to keeping the error always small, instead of reducing it to zero at 10 A. M. By graphical methods, the accuracy of the determination of the error during long periods of cloudy weather has been much increased. It is believed that the error rarely exceeds two tenths of a second in clear weather, and four tenths when cloudy, and that the error seldom changes more than two tenths of a second from one day to the next.

In July, the mean-time clock, Bond 394, stopped, after sending the signals continuously for four years. It was kept in use, however, till October, when it was dismounted and thoroughly repaired. Meanwhile, from October 7 to October 21, the time-signals were sent by the clock of Messrs. W. Bond & Son, in Boston. It is hoped that hereafter it will not be necessary to take this course, as the sufficiently exact regulation of a clock so far from the Observatory proved to be a troublesome and laborious undertaking. In August, the standard sidereal clock, Frodsham 1327, was cleaned and removed to the new brick vault under the west Equatorial. For a period of twenty-five days, beginning August 30, during which it was left wholly undisturbed, its performance was remarkable both for the uniformity and minuteness of its rate. Its error did not vary two tenths of a second on the thirty-two occasions on which it was compared with the stars.

Various ingenious devices have been adopted by Mr. Edmands for use in the Time Service. Among others may be named those for making a single clock run two independent observing circuits, without the use of relays, and without interference of the observations. Spark arresters have been introduced, that on the standard clock being a sounder which gives the breaks of the clock without those of the observer. Another sounder gives the time-signals uninterrupted by the five-minute break. Experiments are in progress with a view of improving the methods of distributing standard time. One of the most important of the proposed improvements is a contrivance by which the signals may be delayed by any desired fraction of a second without affecting the clock. An error in the signals may thus be corrected without interference with the pendulum. By this means many variations in the rate of the clock may be prevented, and its performance proportionally improved.

The time-ball has been dropped correctly on 322 days at twelve o'clock by telegraph. Owing to repairs to the roof of the building, it was not dropped during an interval of thirty-five days. On five days it was dropped at twelve o'clock by hand. On two days it failed to drop at twelve, and was dropped five minutes later, according to the rule; and on one day ice on the mast prevented it from being raised.

Publication. — Volume XIII. of the Annals is now in process of publication, and will be issued as soon as it can be got through the press. It will contain the results of the work with the large telescope, under the direction of the late Professor Winlock, and also the micrometric measurements made up to the present time. Among other subjects treated will be a discussion of the focal length of the telescope and the pitch of the micrometer-screw; measurements of double stars; observations of nebulae and of their spectra; satellites of Saturn, Uranus, and Neptune; satellites of Mars during the opposition of 1877 and 1879; positions of asteroids and comets. An appendix will be added, giving an important list of errata in the zone observations of Professor Bond, kindly furnished by Dr. C. H. F. Peters. As soon as this volume is completed the printing of Volume XIV. will probably be commenced. It will contain the measures made with the meridian photometer.

The papers mentioned below have appeared during the year as communications from officers of the Observatory: —

Variable Stars of Short Period. By Edward C. Pickering. Proc. Am. Acad., xvi. 257. Reprinted in The Observatory, iv. 233, 264, 284.

Large Telescopes. By Edward C. Pickering. Proc. Am. Acad., xvi. 364. Reprinted in Nature, xxiv. 389.

Photometric Measurements of the Variable Stars β *Persei* and DM. 81° 25, made at the Harvard College Observatory. By Edward C. Pickering, Director, and Arthur Searle and O. C. Wendell, Assistants. Proc. Am. Acad., xvi. 370.

On the Probable Period of Swift's Comet. By S. C. Chandler, Jr. Astr. Nachrichten, xcix. 45.

Comet III. 1869. By Edward C. Pickering. Astr. Nachrichten, xcix. 95.

Observations of Last Contact of Solar Eclipse. By Edward C. Pickering. Astr. Nachrichten, xcix. 107.

Elements of Pechüle's Comet (*f*) 1880. By S. C. Chandler, Jr. Astr. Nachrichten, xcix. 109.

The Comparison of Sirius. By Edward C. Pickering. Astr. Nachrichten, xcix. 219.

On Certain Zodiacal Phenomena. By Arthur Searle. Astr. Nachrichten, xcix. 91, 369.

Objects remarkable for their Colors or Spectra. By Edward C. Pickering. Astr. Nachrichten, xcix. 375.

The Coefficient of Safety in Navigation. By W. A. Rogers. Proc. U. S. Naval Institute, vii. No. 2.

A review of Vol. XI. Part II. of the Annals of the Observatory, by Dr. E. Lindemann, appeared in the Vierteljahrsschrift der Astr. Gesellschaft, xvi. 108. A review of the articles on Variable Stars appeared in the Crónica Científica (Barcelona), iv. 401. Other notices of the Observatory and its work will be found in Nature, xxii. 483, 611; xxiii. 321, 338, 604; in Science, ii. 33,107,141,164, 329, 447, 482; in The Observatory, iv. 81, 113, 116, 154, 245; in Copernicus, i. 139, 140.

With reference to the article on large telescopes, it may be noted that should any addition be made to the equipment of the Observatory, a telescope, mounted according to the method there described, is recommended. It is believed that in no other way could the same amount of work be obtained with a given expenditure. With our present resources, however, it is much more desirable to keep the instruments we now have actively at work than to make any addition to their number.

An important piece of bibliographical work has been undertaken, and placed in charge of Mr. Chandler. The references to observations of stars of known or suspected variability have been collected, and those of each star brought together. This portion of the work is more than half completed. The comparison stars are then to be measured photometrically, and, finally, a reduction to a uniform system to be made of all the observations of variables of long period.

Various improvements have been made in the condition of the buildings and grounds. Two wooden balconies, having an area of seven feet by seventeen, have been constructed, to replace the small iron balconies to the east and west of the large dome. They are exceedingly convenient for observations made with small instruments or with the naked eye.

In order to connect the previous determinations of longitudes by the U. S. Lake Survey with an established meridian, it was proposed by the Superintendent of the Survey to determine the difference of longitude between Detroit and Cambridge. Facilities for the work were accordingly furnished by this Observatory, and the observations required were made by officers of the Survey. Later in the season, a course of experiments on the force of gravity, by means of pendulum observations, was conducted at the Observatory by officers of the U. S. Coast Survey, who were provided with similar facilities for their work. The West Equatorial was lent for the summer months to Professor S. P. Langley, who used it in observations made on the summit of Mount Whitney, in California.

There are some advantages in an early announcement of proposed investigations, even when the preliminary experiments are not sufficiently advanced to insure their execution. The aid and advice of other astronomers may thus sometimes be secured, and the danger of duplication of work is greatly reduced. No change in the character of the work is proposed, except that an attempt will be made to restrict the work of the large telescope more closely to large pieces of routine work. Such investigations are less likely to be made at observatories where the corps of assistants is smaller, and have a value not attained by detached observations. With the ultimate object of determining the distribution of the light in the spectra of the banded stars, a stellar spectroscope has been ordered of Mr. Hilger, of London. With this it is proposed to measure the position of the principal lines in the spectra of all the banded stars as yet known. A catalogue of these objects has already been compiled. With the approval and assistance of the Selenographical Society, the photometric determination of the brightness of various points on the surface of the moon has been undertaken. The Society has furnished a list of regions suitable for standards, and the observations may be begun after the decision of some further preliminary questions. The most important of these relates to the age of the moon at which the comparisons should preferably be made. In co-operation with other astronomers, a system of standards of brightness for faint stars has been devised, and measurements of their light will be shortly undertaken.

The new meridian photometer will be used for measuring variable stars and their comparison stars, and also for determining the light of the brighter asteroids. An important piece of work is now under consideration, which would occupy this instrument for several years. During the revision of the Durchmusterung, undertaken by a number of co-operating observatories, and now approaching completion, each of the zones into which the entire region to be surveyed was divided, was somewhat extended northward and southward, so as to overlap the adjacent zones. The object of this extension was to connect the work of the different observers. Hence, the portions of the sky occupied by the overlapping borders of the zones offer a promising field for photometric research, as each determination may be compared with the estimates of magnitude made independently by two observers, with the Durchmusterung itself, with the zones of Argelander and Bessel, and with various other authorities. The number of stars to be measured is estimated at about six thousand, and the time required for the observations with the new meridian photometer would be at least three years.

EDWARD C. PICKERING, *Director.*

TO THE PRESIDENT AND FELLOWS OF HARVARD COLLEGE:—

DURING the past year the exterior of the northwestern cornerpiece of the Museum building has been finished, and fair progress made towards the completion of the interior. Four of the rooms are now ready for use, and the greater part of the rest of the building will be finished during the coming year.

The usual instruction has been given at the Museum by Professors Whitney, Shaler, Hagen, James, Farlow, and Faxon, and by Messrs. Mark, Davis, and Wadsworth. For the details of these courses, I would refer to the special reports of the Professors and Assistants.

An arrangement has been made with Professor S. F. Baird, United States Fish Commissioner, by which the Museum will have the right to send annually one student to Wood's Holl to avail himself of the facilities for the prosecution of zoölogical research afforded by the new zoölogical station to be established by the Commissioner.

As in former years, two of the assistants of the Museum and two special students spent the greater part of the summer at my Newport Laboratory. The former devoted their time principally to embryological studies of Crustacea and Acalephs. A part of the collection of Crustacea dredged by the "Blake" has been returned by Professor Alphonse Milne-Edwards. Professor Oscar Schmidt has also returned the whole of the collection of " Blake " Sponges. Professor Carus has returned the Cephalopods.

Collections have been sent for study to Professor Verrill, to Dr. Meinert, to Mr. Simon, to Mr. Eaton, and to Count Keyserling.

The publications of the Museum during the past year are shown in detail in Appendix A. to the separate Report on the Museum. They consist of Bulletins by Messrs. Agassiz, Lyman, Verrill, Fewkes, Faxon, Wadsworth, Hamlin, Garman, Allen, and Hagen.

The preliminary Reports of the " Blake" collections have made excellent progress during the past year. Part I. of the Crustacea by Professor Alphonse Milne-Edwards has been published; also the preliminary Reports of the Starfishes by Professor Perrier, and of the Mollusca by Mr. Dall. The Reports on the Cephalopods by Professor Verrill, and by Mr. Wilson, E. B.,on the Pycnogonidæ, have been issued in the Museum Bulletins. No. 2, Vol. VII. of the Memoirs containing the " Climatic Changes " by Professor J. D. Whitney has been issued, in connection with Professor Whitney; and the Second Part of the Immature State of the Odonata, the Æschnina, has been published by Mr. Louis Cabot.

The additions to the Library have not been quite so large as usual, as no extensive purchases were made this year.

Among the publications of the Assistants of the Museum not issued in the Museum publications, may be mentioned a monograph by Mr. J. A. Allen on the Seals, founded in part on Museum material, and published in the United States Geol. Survey Report.

Professor Shaler and Mr. Davis have published the first of a series of Memoirs intended to illustrate the principal features of the structure of the crust of the earth.

Mr. Lyman has published a paper on some remarkable deep-sea Ophiurans, in the Memoirs of the Boston Society of Natural History, and has also completed his final Report on the Ophiurans of the " Challenger."

I have myself seen through the press the final report on the Echini of the " Challenger " Expedition to be issued as Vol. III. of the Zoölogy of that expedition; it forms 321 pages and 65 plates.

During the past year the lower floor of the Systematic Collections of Mollusks and the South American Faunal room have been opened to the public, although the collections they contain are not yet properly labelled. Good progress has also been made in the arrangement of the Australian room, and the materials for the African and Indian Faunal Collections are coming in at a satisfactory rate. The completion of the exhibition rooms of the wing will now enable us to make the final arrangement of the Systematic Collection of Fishes and of Birds, as all the material foreign to these collections has been removed to the proper storage rooms.

The Annelids have, as usual, been under the care of Dr. Mark. There is nothing special to report on this collection; the bulk of it is still in Europe in the hands of Professor Ehlers.

The Corals and Sponges have during the past year been in charge of Mr. Fewkes, who has selected sets of duplicates of the "Blake" Sponges for distribution, and commenced the arrangement of the Halcyonoids for the Systematic Collection.

A complete series of Blatschka glass models of Radiates has been added to the Systematic room of that group. Two important collections of Invertebrate palæozoic fossils have been purchased during the year, one the collection of Professor G. Washington Taylor, principally rich in fossil Cephalopods, from the New York Silurian. Also the collection of the Rev. F. H. Day, brought together during a series of twenty years, mainly from the Niagara limestone of Wisconsin, near Milwaukee.

During the past season Mr. Garman has been engaged in collecting fossil Vertebrates in the Bad-lands, supplementing the collection made by him from these localities during the previous year. Mr. Charles H. Sternberg has also been engaged in collecting for the Museum, and has brought together an admirable collection of Cretaceous Plants of Kansas. His collections, as well as a collection of Duplicates of Western Tertiary and Cretaceous Plants presented to the Museum by the Smithsonian, have been identified by Mr. Lesquereux, who has also examined a small collection made for the Museum by the Rev. A. Lakes, and a collection of Carboniferous Plants from Cannelton.

Mr. Sternberg, after making the collections of the Dakota group, moved further West, and has explored some of the well known Vertebrate fossil localities of Western Kansas. The collections of these explorations have arrived at the Museum; a more detailed report of their contents cannot be given at present, until they have been more carefully examined.

J. C. Bartlett, instructor 1871–74. Principal of Taunton High School. Engineer.

G. T. Dippold, instructor 1871–73. Teacher. Instructor in Boston University.

E. B. Dalton, instructor 1871–72. Died 1872.

A. W. Gould, tutor 1873–74, 1878–81. Instructor in Williams College.

I. B. Barker, tutor 1874–75. Died 1875.

W. G. Hale, tutor 1874–75, 1877–80. Professor in Cornell University.

W. H. Rollins, instructor 1874–78. Dentist.

G. R. Briggs, tutor 1875–81. Student and author.

R. W. Willson, tutor 1875–81. Assistant in Winchester Observatory, Yale College.

W. E. Story, tutor 1875–76. Associate at the Johns Hopkins University.

O. Faulhaber, tutor 1875–78. Teacher.

C. E. Hamlin, instructor 1875–77. Assistant in the Museum of Zoölogy.

L. R. Briggs, tutor 1878–81. Candidate for A. M.

J. H. Wheeler, tutor 1880–81. Professor in Bowdoin College.

II.

List of persons appointed tutors or instructors since 1860, and still in the service as tutors or instructors. Annual appointments are not included.

C. H. Moore, instructor 1871– Drawing and Design.

C. B. Porter, instructor 1871– Surgery.

F. I. Knight, instructor 1872– Laryngoscopy.

J. C. Warren, instructor 1872– Surgery.

H. Howland, tutor 1872–74, (annual) instructor 1879–82. Torts.

J. G. Croswell, tutor 1874–78, 1881– Greek and Latin.

W. B. Hills, instructor 1874– Chemistry.

W. L. Richardson, instructor 1874– Obstetrics.

F. W. Dean, tutor 1875– Engineering.

M. E. Wadsworth, instructor 1874–77. Mineralogy and Geology. Assistant (1878) in the Museum of Zoölogy.

E. Young, instructor 1875–78, 1880– History.

S. M. MacVane, instructor 1876– History.

W. H. Baker, instructor 1877– Gynaecology.

E. S. Sheldon, tutor 1878, instructor 1881– Modern Languages.

F. Lutz, tutor 1878– German.

H. N. Wheeler, instructor 1878– Mathematics.

E. Emerton, instructor 1878– History.

W. M. Davis, instructor 1879– Geology.

Ko-Kun-Hua, instructor 1879– Chinese.

E. E. Phillips, tutor 1880– Greek and Latin.

Henry Preble, tutor 1881– Greek and Latin.

E. L. Mark, instructor 1881– Zoölogy.

III.

The following extract is from the will of Thomas Carlyle, dated February 6, 1873. The will contains no other public bequest.

"Having with good reason, ever since my first appearance in Literature, a variety of kind feelings, obligations, and regards towards New England, and indeed long before that a hearty good will, real and steady, which still continues, to America at large, and recognizing with gratitude how much of friendliness, of actually credible human love, I have had from that Country, and what immensities of worth and capability I believe and partly know to be lodged, especially in the silent classes there, I have now after due consultation as to the feasibilities, the excusabilities of it, decided to fulfil a fond notion that has been hovering in my mind these many years; and I do therefore hereby bequeath the books (whatever of them I could not borrow, but had to buy and gather; that is, in general whatever of them are still here) which I used in writing on Cromwell and Friedrich, and which shall be accurately searched for and parted from my other books, to the President and Fellows of Harvard College, City of Cambridge, State of Massachusetts, as a poor testimony of my respect for that *alma mater* of so many of my Trans-Atlantic friends, and a token of the feelings above indicated towards the Great Country of which Harvard is the Chief School. In which sense I have reason to be confident that the Harvard authorities will please to accept this, my little bequest, and deal with it, and order and use it, as to their own good judgment and kind fidelity shall seem fittest. A certain symbolical value the bequest may have, but of intrinsic value as a collection of old books it can pretend to very little. If there should be doubt as to any books coming within the category of this bequest, my dear Brother John, if left behind me as I always trust and hope, who already knows about this Harvard matter, and who possesses a Catalogue or List drawn up by me, of which the counterpart is in possession of the Harvard authorities, will see it for me in all points accurately done. In regard to this, and to all else in these final directions of mine, I wish him to be regarded as my second self, my surviving self. . . .

T. Carlyle."

IV.

REPORT OF THE ASSISTANT IN CHARGE OF THE HERBARIUM AND MUSEUM OF THE ARNOLD ARBORETUM FOR THE YEAR ENDING AUGUST 31, 1881.

Work in the Museum and Herbarium has continued throughout the year, and the value of the Herbarium as a reference collection has been considerably increased.

During the year, 1,610 specimens (750 species) of plants have been prepared at the Herbarium or received by donation, including a large number of cones, nuts, and other tree products.

There have been received, in addition to these, 330 specimens (190 species) of woods, including a collection of upwards of 50 specimens of foreign woods sent from the Royal Gardens, Kew, England. Of these, many are large logs or fine specimens, illustrating peculiar qualities or remarkable formations of the wood.

There have been received a number of photographs of forest scenery and ligneous vegetation; also, various specimens illustrating the economic value and properties of trees.

During the year, 208 specimens (162 species) of plants and woods have been distributed among twenty-two institutions and private individuals in the United States and Europe.

During the year, 1,650 specimens (850 species) of plants have been poisoned and mounted on herbarium sheets, in conformity with the plan adopted last year and in general use in other large collections.

Ten more cabinets have been added, and these, as well as those previously purchased, are all now nearly filled. The *Coniferae*, which had previously received only temporary arrangement, are now arranged in the cabinets, each species being placed in a separate box, in order that the large fruits may be kept with, and easy reference made to, the foliage and flowers of the species. A supplementary set of cones and other tree fruits have been arranged in a large museum case, to exhibit the general collection more conveniently, each species being mounted on a separate tablet.

The calendar of flowering of the trees and shrubs in the vicinity of Boston, kept for the season of 1880, has been published in the transactions of the Massachusetts Horticultural Society. A similar calendar has been kept during the current year.

JOHN ROBINSON, *Assistant in charge.*

V.

SUMMARY OF STUDENTS IN THE UNIVERSITY AT THE BEGINNING OF THE ACADEMIC YEAR 1880–81.

College,		
Seniors	195	
Juniors	186	
Sophomores	204	
Freshmen	243	
		828
Unmatriculated Students		15
Lawrence Scientific School		37
Bussey Institution		6
Dental School		18
Medical School		241

Law School	156
Divinity School	23
Candidates for the Degrees of A.M., Ph.D., and S.D.	34
Holders of Fellowships	7
Resident Graduates not Candidates for a Degree	2
	1367

Persons who attended the Summer Courses in Science in 1881.

Chemistry	17	
Botany	10	
		27

Number of Certificates issued to Women in 1881.

Preliminary Examination	8
Advanced Examination	9

VI.

ACADEMIC HONORS FOR THE YEAR 1880–81.

COMMENCEMENT, JUNE 29, 1881.

Orations.

Arthur Orcutt Jameson,
James Bettner Ludlow,
William Coolidge Lane,
Charles Bingham Penrose,
Gardiner Martin Lane,
Frederic Joaquim Barbosa Cordeiro,
Alfred Jaretzki,
Henry Edwards Scott,
Edmund Allen Whitman,
Hermann Ivah Thomsen,
Curtis Guild,
Edward Lathrop Rand,
Charles Wendell Townsend,
George Albert Burdett.

Dissertations.

James Robbins Howe,
Arthur Wellington Roberts,
Farley Brewer Goddard,
John Norton Johnson,
John Wallace Suter,
Henry Leverett Nelson,
James Parker Parmenter,
Otto Mueller,
Joel Herbert Seaverns,
William Loring Worcester,
John Stevens Melcher,
John Edward Maude,
Winthrop Howland Wade,
Frank Clinton Fernald,
John Frank Davis,
Chester Allyn Reed,
John Carew Rolfe,
Henry Olmstead Rolfe,
Richard Edwards,
George Phineas Upham,
Boies Penrose,
William Henry Coolidge,
Merle St. Croix Wright,
Charles Howard Atkins,
Garry De Nerville Hough,
Abbot Low Mills,
Marshall Perry Slade,
Edward Collins Porter,
John Amory Jeffries,
Oliver Mayhew Whipple Huntington,
George Angier Gordon,
George Dickson Markham.

Disquisitions.

Joseph Elwyn Maxfield,
Frederic William Stuart,
Alanson Joseph Abbe,
Edward Winslow Brewer,
John Prescott Farnsworth,
Charles Turner Dazey,
Morris Hicky Morgan,
Frederick Silas Gregory Reed,
Robert Williamson Lovett,
Irving Gardiner Stanton,
John Gerrish Wood,
Eugene Charles Upton,
Charles Henry Leonard Delano,
Louis Brackett Carr,
Frederic Erastus Crawford,
Thomas Parker Ivy,
Samuel Hopkins Spalding,
Charles Andrews Mitchell,
Prescott Evarts,
Mars Edward Wagar,
William Henry Robinson,
Eugene Yancey Cohen,
Frank Bellows Allen,
Eugene Dexter Hawkins,
John William O'Callaghan,
Godfrey Michael Hyams,
Frank Woods Baker,
Arthur Carlton Jelly,
John Allen Collier Wright,
Ezra Henry Baker,
George Frederic Joyce,
Paul Barron Watson,
John Cummings Munro,
Charles Robert Sanger,
Addison Sanford Thayer,
Joseph Emerson Hadley,
Charles Hooper Jackson,
Henry Ellison Seaver,
Charles Fellows Squibb,
Joseph Henry Adams,
Richard Clipston Sturgis,
Howard Preston Haines,
William Roscoe Thayer,
Samuel Wylie,
Algernon Coolidge,
George Allen Staples,
George Knowles Swinburne,
James Bliss,
Frederic William Sharon,
Edward Roscoe Merrill,
Frederic Otis Barton,
James Leonard Paine,
Heyliger Adams De Windt,
George Henry Williams,
Robert Sturgis.

HONORS AT GRADUATION.

In Classics.

Arthur Orcutt Jameson,	Highest Honors.
Farley Brewer Goddard,	Honors.
Alfred Jaretzki,	Do.
John Norton Johnson,	Do.
Gardiner Martin Lane,	Do.
James Bettner Ludlow,	Do.
Henry Leverett Nelson,	Do.
Arthur Wellington Roberts,	Do.
John Carew Rolfe,	Do.
Henry Edwards Scott,	Do.

In Philosophy.

Charles Howard Atkins,	Honors.
George Angier Gordon,	Do.
John Edward Maude,	Do.
Edward Collins Porter,	Do.

In History.

Henry Edwards Scott,	Highest Honors.
George Dickson Markham,	Honors.
Abbot Low Mills,	Do.

In Mathematics.

Frederic Joaquim Barbosa Cordeiro,	Highest Honors.
Hermann Ivah Thomsen,	Do.

In Natural History.

Charles Wendell Townsend,	Highest Honors.
Otto Mueller,	Honors.
John Amory Jeffries,	Do.

In Physics.

Charles Bingham Penrose,	Highest Honors.

In Chemistry.

Garry De Nerville Hough,	Honors.
Oliver Mayhew Whipple Huntington,	Do.
Marshall Perry Slade,	Do.
Edmund Allen Whitman,	Do.

In Music.

George Albert Burdett,	Highest Honors.

HONORABLE MENTION AT GRADUATION.

Alanson Joseph Abbe. *Chemistry.*
Joseph Henry Adams. *Philosophy; History.*
Frank Bellows Allen. *History.*
Charles Howard Atkins. *Philosophy.*
Ezra Henry Baker. *Political Economy.*
Frank Woods Baker. *Philosophy.*
Frederick Otis Barton. *History.*
Walter Van Rensselaer Berry. *French.*
James Bliss. *Philosophy.*
Edward Winslow Brewer. *History.*
George Albert Burdett. *Music.*
Eugene Yancey Cohen. *History.*
Algernon Coolidge. *Natural History.*
William Henry Coolidge. *History.*
Frederic Joaquim Barbosa Cordeiro. *English Composition; Mathematics; Physics.*
Frederic Erastus Crawford. *Philosophy.*
John Francis Davis. *German; English Composition; History.*
Charles Turner Dazey. *German; English Composition.*
Heyliger Adams De Windt. *Natural History.*
Richard Edwards. *Philosophy.*

Prescott Evarts. *Greek; Latin.*
John Prescott Farnsworth. *Natural History.*
Frank Clinton Fernald. *Natural History.*
Charles Henry Wheelwright Foster. *Chemistry.*
Farley Brewer Goddard. *Greek; Latin; Philosophy.*
George Angier Gordon. *Philosophy.*
Herbert Eveleth Greene. *Latin.*
Curtis Guild. *English; French; English Composition; History.*
Joseph Emerson Hadley. *Mathematics.*
Howard Preston Haines. *Chemistry.*
Frederic Wood Hardy. *Philosophy.*
Eugene Dexter Hawkins. *Philosophy.*
Garry De Nerville Hough. *Chemistry.*
James Robbins Howe. *Greek; Latin.*
Oliver Mayhew Whipple Huntington. *Chemistry.*
Godfrey Michael Hyams. *Chemistry.*
William Hyde. *Natural History.*
Thomas Parker Ivy. *English Composition; History.*
Charles Hooper Jackson. *Philosophy; History.*
Arthur Orcutt Jameson. *Greek; Latin; English Composition; Mathematics.*
Alfred Jaretzki. *Greek; Latin; English Composition; History.*
John Amory Jeffries. *Natural History.*
Arthur Carlton Jelly. *Chemistry.*
John Norton Johnson. *Greek; Latin; English Composition.*
Henry Olmstead Jones. *German.*
George Frederic Joyce. *Chemistry.*
Frederic Theron Knight. *Philosophy.*
Gardiner Martin Lane. *Greek; Latin; English Composition.*
William Coolidge Lane. *Natural History.*
Robert Williamson Lovett. *Natural History.*
James Bettner Ludlow. *Greek; Latin; Fine Arts.*
George Dickson Markham. *History.*
Edward Palmer Mason. *Philosophy; Music.*
John Edward Maude. *Philosophy; History; Political Economy.*
Joseph Elwyn Maxfield. *Mathematics.*
John Stevens Melcher. *Greek; English Composition; History.*
Edward Roscoe Merrill. *Philosophy.*
Abbot Low Mills. *History.*
Charles Andrews Mitchell. *German.*
Morris Hicky Morgan. *Latin.*
Otto Mueller. *Chemistry; Natural History.*
John Cummings Munro. *Music.*
Henry Leverett Nelson. *Greek; Latin.*
John William O'Callaghan. *Greek.*
James Leonard Paine. *Natural History.*
James Parker Parmenter. *Greek; Latin.*
Boies Penrose. *Political Economy.*
Charles Bingham Penrose. *English Composition; Mathematics; Physics.*

Edward Collins Porter. *Philosophy.*
Edward Lathrop Rand. *Latin; English Composition.*
Chester Allyn Reed. *History.*
Frederick Silas Gregory Reed. *Philosophy; History.*
Arthur Wellington Roberts. *Greek; Latin.*
William Henry Robinson. *Greek.*
John Carew Rolfe. *Greek; Latin.*
Charles Robert Sanger. *Chemistry.*
Henry Edwards Scott. *Greek; Latin; English Composition; History.*
Henry Ellison Seaver. *Greek; Latin.*
Frederic William Sharon. *History.*
Marshall Perry Slade. *Chemistry.*
Richard Sprague. *History.*
Charles Fellows Squibb. *Natural History.*
Irving Gardiner Stanton. *Greek.*
George Allen Staples. *Greek.*
Roderick Stebbins. *Philosophy.*
Frederic William Stuart. *Chemistry; Natural History.*
Richard Clipston Sturgis. *Philosophy.*
Robert Sturgis. *Natural History.*
John Wallace Suter. *Latin; Philosophy.*
George Knowles Swinburne. *Chemistry.*
Addison Sanford Thayer. *Natural History.*
William Roscoe Thayer. *Italian; Spanish.*
Hermann Ivah Thomsen. *Mathematics; Chemistry.*
Charles Wendell Townsend. *Natural History.*
George Phineas Upham. *History.*
Eugene Charles Upton. *Greek; Latin.*
Winthrop Howland Wade. *History.*
Mars Edward Wagar. *German; French.*
Paul Barron Watson. *Philosophy.*
Horace Leslie Wheeler. *Fine Arts.*
Edmund Allen Whitman. *Greek; History; Chemistry.*
Frank Smith Williams. *History.*
George Henry Williams. *Italian; Spanish.*
John Gerrish Wood. *Mathematics.*
William Loring Worcester. *Chemistry; Natural History.*
John Allen Collier Wright. *Philosophy.*
Merle St. Croix Wright. *English; German.*
Samuel Wylie. *Philosophy.*

SECOND-YEAR HONORS.

In Classics.

Juniors:

Frank Gaylord Cook,	Honors.
Charles Henry Goldthwaite,	Do.
Russell Whitman,	Do.

Sophomores:

Archie Livingstone Hodges,	Highest Honors.
Frederick Nichols,	Do.
Herbert Putnam,	Do.
John Henry Wigmore,	Do.
Luther Atwood,	Honors.
Angell Boss Babbitt,	Do.
Edward Twisleton Cabot,	Do.
Joseph Randolph Coolidge,	Do.
John William Fox,	Do.
Frank Elwood Jennison,	Do.
Frank Warton Kaan,	Do.
Patrick Michael Keating,	Do.
George Paul Keith,	Do.
Herbert Marshall Lloyd,	Do.
Morris Loeb,	Do.
George Emerson Lowell,	Do.
William Hussey Page,	Do.
Oscar Edward Perry,	Do.
Arthur Henry Woodbury,	Do.

In Mathematics.

Sophomores:

George William Evans,	Highest Honors.
Mellen Woodman Haskell,	Do.
Alfred Church Lane,	Do.
Robert Emmet O'Callaghan,	Do.

VII.

PRIZES.

DETURS.

THE following students received books, called "Deturs," from the foundation of Edward Hopkins, for excellence in scholarship: —

Freshmen of 1879–80.

Robert Gordon Butler,
Edward Cummings,
George Henry Heilbron,
Fletcher Ranney,
John Henry Wigmore,
Arthur Henry Woodbury,
Charles Pomeroy Worcester.

Freshmen of 1880–81.

Charles Francis Aiken,
Hartley Frederic Atwood,
Benjamin Edward Bates,
Heinrich Conrad Bierwirth,

Josiah Bridge,
Romeo Green Brown,
Frederic Story Bunker,
Thomas Jefferson Coolidge,
William Wallace Fenn,
Theodore Longfellow Frothingham,
William Amory Gardner,
James Newton Garratt,
Lewis Edwards Gates,
Arthur Gillespie Hatch,
Eugene Hamlin Hatch,
Harry Hubbard,
James Richard Jewett,
Walter Perry Johnson,
Gilbert Norris Jones,
Edward Kirk Keep,
Frederic Randolph King,
Reuben Whittle Lovering,
Edward Chandler Marston,
John Ulric Nef,
John Prentiss,
George William Sawin,
George Andrew Stewart,
Correa Moylan Walsh,
Hollis Webster.

Bowdoin Prizes.

William Schofield, of the Class of 1879,
Walter Allen Smith, of the Class of 1880,
Thomas Parker Ivy, of the Class of 1881,
George Lyman Kittredge, of the Class of 1882,
Frank Gaylord Cook, of the Class of 1882.

Boylston Prizes for Elocution.

First Prizes.

Henry John Dixon Jones, of the Class of 1881,
Edmund Seahon Perin, of the Class of 1882.

Second Prizes.

Paul Barron Watson, of the Class of 1881,
Gustavus Tuckerman, of the Class of 1882,
Burton Monroe Firman, of the Class of 1882.

Lee Prizes for Reading.

Sophomores.

Samuel Atkins Eliot,
William Wallace Fenn,
Hollis Webster,
Edward Wheeler Frost,
William Belden Noble.

Freshmen.

Greenough Thayer, from Phillips Andover Academy,
Lucius Junius Henderson, from a private tutor,
Walter Folger Greenman, from the Chelsea High School,
William Kinnicutt Draper, from Adams Academy,
Edward Blake Young, from the Cambridge High School.

VIII.

DEGREES.

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Bachelors of Laws	18
Doctors of Medicine	60
Doctors of Dental Medicine	5
Civil Engineer	1
Bachelor of Science	1
Bachelors of Agriculture	3
Doctors of Philosophy	2
Doctor of Science	1
Masters of Arts	7

HONORARY DEGREES.

Master of Arts.

Francis Cogswell, of Cambridge.

Doctors of Laws.

James Denison Colt.
George William Curtis.

IX.

COMMITTEES OF THE OVERSEERS FOR 1881.

To visit the University.

President of the Board of Overseers.
His Excellency the Governor.
His Honor the Lieutenant-Governor.
The President of the Senate.
The Speaker of the House of Representatives.
The Secretary of the Board of Education.
The Secretary of the Board of Overseers.
The Chairman of each of the Visiting Committees.

To visit the Academical Department.

Edwin P. Seaver.
Alexander McKenzie.
Edward E. Hale.
Theodore Lyman.
Le Baron Russell.
Francis G. Peabody.
Oliver F. Wadsworth.
John Noble.
Roger Wolcott.
J. Lewis Stackpole.
Arthur Dexter.
J. B. Warner.

Robert D. Swett.
John Fisher.
Ralph W. Emerson.
Henry Lee.
Moorfield Storey.
John T. Morse, Jr.
Robert M. Morse, Jr.
J. Elliot Cabot.
George B. Chase.
C. C. Perkins.
Thomas W. Higginson.
S. Lothrop Thorndike.
John S. Dwight.
H. C. Lodge.
William H. Niles.
W. F. Apthorp.
J. O. Means.
J. H. Means.
E. A. Park.
Francis Blake, Jr.
William Watson.
Robert Amory.
Russell Gray.
George L. Osgood.
J. D. Runkle.
Percivall Lowell.
Charles G. Loring.
Thomas B. Curtis.
Richard M. Hodges.
Charles Francis Adams.
W. B. Swett.
George B. Bradford.
J. T. G. Nichols.
Henry W. Foote.
W. R. Ware.
H. Wheatland.
D. F. Lincoln.
W. J. Rolfe.
C. P. Cranch.
D. B. Hagar.
E. G. Porter.
W. Higginson.
Thomas Davidson.
F. B. Sanborn.
George V. Leverett.
Charles R. Cummings.
Prentiss Cummings.
Walter C. Cabot.
E. T. Williams.
Charles P. Curtis.
Abbott Lawrence.
Brooks Adams.
Robert E. Balsa.
Henry Sedgwick.
Julius Dexter.
J. B. Torricelli.
Edward Edes.
Alpheus Hyatt.
David Sears.

To visit the Divinity School.

Phillips Brooks.
Francis G. Peabody.
James Freeman Clarke.
Edward E. Hale.
Alexander McKenzie.
Edward H. Hall.
Thomas Hill.
Adams Ayer.
A. B. Mussey.
F. Johnson.
W. Higginson.
H. W. Foote.
C. F. Dole.
Edward A. Washburn.

To visit the Law School.

John Lowell.
Leverett Saltonstall.
George O. Shattuck.
O. W. Holmes, Jr.
William G. Russell.
Darwin E. Ware.
Peter B. Olney.
Edmund Wetmore.
W. C. Endicott.
R. D. Smith.
Moorfield Storey.
Francis E. Parker.
E. R. Hoar.
Francis C. Barlow.
Charles C. Beaman.

To visit the Lawrence Scientific School, the Bussey Institution, the Museum of Comparative Zoölogy, and the Peabody Museum of American Archaeology and Ethnology.

Morrill Wyman.
Theodore Lyman.
Charles R. Codman.
R. M. Hodges.
Stephen Salisbury.
Edwin P. Seaver.
T. Jefferson Coolidge.
William E. Whorten.
Clemens Herschel.
Thomas C. Clarke.
B. S. Rotch.
Robert W. Hooper.
Gustavus Hay.
James Lawrence.
Chauncey Whitaker.
Charles O. Thompson.
Samuel M. Felton.
Alphonse Fteley.
Ernest W. Bowditch.

To visit the Medical and Dental Schools.

Le Baron Russell.
Morrill Wyman.
R. M. Hodges.
Samuel A. Green.
Joseph Sargent.
Frederick Winsor.
John C. Dalton.
Austin Flint.
John G. Park.
George C. Shattuck.
Hall Curtis.
James L. Little.
Samuel L. Abbott.
Samuel M. Weld.
Algernon Coolidge.

To visit the Observatory.

James Freeman Clarke.
Charles Francis Adams.
William Amory.
J. I. Bowditch.
John C. Palfrey.
Robert C. Winthrop.
Charles F. Choate.
Frederick O. Prince.
Simon Newcomb.
Charles R. Codman.
Amos A. Lawrence.
Francis H. Peabody.
George I. Alden.
Robert T. Paine.
J. R. Coolidge.
Alvan Clark.
Augustus Lowell.
J. Montgomery Sears.

To visit the Library.

Phillips Brooks.
O. W. Holmes, Jr.
J. O. Sargent.
Samuel A. Green.
Charles A. Cutter.
Samuel F. Haven.
Samuel S. Green.
R. W. Emerson.
D. A. Goddard.
H. G. Denny.
H. F. Jenks.
Mellen Chamberlain.
John M. Brown.
John Fiske.
John T. Morse, Jr.
E. R. Hoar.
W. W. Greenough.
George W. Wales.
Charles C. Smith.
Stephen Salisbury, Jr.
Samuel Eliot.
F. W. Balch.
Charles Deane.
James T. Fields.
George Dexter.
George H. Moore.

On the Treasurer's Accounts.

Leverett Saltonstall.
John Lowell.
Charles H. Parker.
Nathaniel Silsbee.
Henry Lee.
Amos A. Lawrence.
J. M. Spelman.
George B. Chase.

On Elections.

Henry W. Paine.
George O. Shattuck.
William C. Endicott.
Moorfield Storey.
John Lowell.

On Reports and Resolutions.

William G. Russell.
Henry W. Paine.
William Amory.
Francis E. Parker.
William C. Endicott.
Robert D. Smith.
Darwin E. Ware.

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HARVARD COLLEGE.

TREASURER'S STATEMENT.

1881.

TREASURER'S STATEMENT.

To the Board of Overseers of Harvard College:—

The Treasurer of the College submits the Annual Statement of the financial affairs of the University, for the year ending August 31, 1881, in the usual form.

The Funds separately invested are as follows: —

	Principal.	Income.
UNIVERSITY.		
Leonard Jarvis Fund (part of),		
Real Estate in Baltimore, sold during the year, ...		$643.47
COLLEGE.		
Bowditch Scholarships (part of),		
$70,000, Massachusetts 5% Bonds, ...	70,000.00	3,500.00
Bassett Scholarships (part of),		
Mortgage, ...	5,000.00	275.00
Pennoyer Scholarships (part of),		
Pennoyer Annuity in England, ...	4,444.44	277.50
Rumford Professorship (part of),		
French Rentes, ...	10,000.00	577.94
Jonathan Phillips Fund,		
Mortgage, ...	10,000.00	525.00
Daniel H. Peirce Fund (part of),		
Mortgage, ...	12,375.62	742.54
Samuel Ward's Gift,		
Ward's (Bumkin) Island, Boston Harbor, . . .	1,200.00	50.00
Botanic Garden Fund (part of),		
$17,000 New York Central R. R. Bonds, ...	17,000.00	1,020.00
LIBRARY.		
Charles Minot Fund (part of),		
$60,000, Buffalo, Bradford, & Pittsb. R. R. Bonds,	60,000.00	4,200.00
Ichabod Tucker Fund (part of),		
Policy of Mass. Hospital Life Insurance Co., . .	5,000.00	200.00
Amounts carried forward, . . .	$195,020.06	$12,011.45

Amounts brought forward, ...	$195,020.06	$12,011.45

SCIENTIFIC SCHOOL.

James Lawrence Fund,		
$50,000, United States 6% Bonds, sold during the year,		3,000.00
John B. Barringer Fund (part of),		
40 shares Schenectady Bank Stock, ...	2,200.00	200.00

MUSEUM OF COMPARATIVE ZOÖLOGY.

Gray Fund for Museum,		
Manufacturing Co.'s and R. R. notes, paid during the year,		2,893.75
Sturgis Hooper Fund (part of),		
$20,000, Erie Basin Dock and Warehouse Bonds, paid off during the year, ...		4,025.00
Agassiz Memorial Fund (part of),		
Personal notes (endorsed), ...	29,658.75	1,100.00

OBSERVATORY.

Anonymous gift (now used to pay annuities),		
$1,000, Michigan South'n & No. Indiana R.R. Bond,	1,000.00	70.00
$2,000, Cincinnati Municipal Bonds, ...	2,000.00	140.00
$2,000 Minneapolis Municipal Bonds, ...	2,000.00	160.00
50 shares Pittsburg, Fort Wayne, & Chicago, R. R. Stock, ...	5,000.00	350.00

SPECIAL FUNDS.

Bussey Trust,		
Real Estate, ...	413,092.80	13,903.04
Gray Fund for Engravings (part of),		
$15,000, United States 5% Bonds, sold during the year,		562.50
Robert Troup Paine Fund (accumulating),		
$21,000 Mass. 5% Bonds, ...	24,050.00	754.03
	$674,021.61	$39,169.77

The other Funds of the College are invested as a whole. These investments, with the income thereof, are as follows :

Investments.	Principal, September 1, 1880.	Principal, August 31, 1881.	Income.
Notes, Mortgages, &c., ...	$876,103.74	$711,103.74	$48,352.94
Railroad Bonds and Premiums, . . .	889,598.70	972,532.48	49,432.06
Railroad Stock, ...	32,150.22	32,150.22	3,295.00
New Boston Coal Mining Co. Bonds,	9,000.00	9,000.00	350.00
Bank Stock, ...	63,964.00	63,964.00	4,496.73
Manufacturing Stock, ...	102,058.29	102,058.29	10,375.00
Real Estate, ...	905,511.30	1,396,073.30	51,700.06
Unoccupied Lands, ...	90,027.79	75,487.79	
Brattle Street Reversion, ...	1,000.00	1,000.00	
Amounts carried forward,	$2,969,414.04	$3,363,369.82	$168,001.79

Amounts brought forward,	$2,969,414.04	$3,363.369.82	$168,001.79
Advances to Scientific School, . . .	7,946.49	4,905.14	476.79
" " Dental School, ...	16,132.17	15,827.74	967.93
" " Bussey Trust, ...	40,566.13	40,566.13	2,028.31
" " Dining Hall Association,	38,732.16	37,232.16	2,323.93
" " Scudder's Catalogue, .	347.36	233.42	
" " Agassiz Building Fund,	6,559.50		155.39
" " Chinese Subscription,	311.53	374.38	
" for altering Appleton Chapel,	2,859.62	2,859.62	
" " repairing College Wharf,	777.46	411.88	54.42
Term Bills not collected Aug. 31, 1881,	75,644.85	73,423.36	
Baring Brothers & Co., ...	348.27		26.73
Cash in Suffolk National Bank, .	3,174.94	19,063.38	
Cash in hands of Bursar, ...	1,071.06	1,131.61	
Totals of general investments,	3,163,885.58	3,559,398.64	174,035.29
Totals of special investments,	795,670.50	674,021.61	39,169.77
Amounts, . . .	$3,959,556.08	$4,233.420.25	$213,205.06

During the year, $200,000 of Republican Valley R. R. bonds have been converted into $200,000 of Burlington & Missouri in Nebraska R. R. bonds. The gains on sale of Eastern R. R. bonds and Chicago, Burlington, & Quincy R. R. bonds, which were bought some years ago, amounting to $14,540, have been credited to the account of "unoccupied lands," as the most suitable way of restoring to the Funds sharing in "general investments" gains which belong to their capital. The gain on sale of $100,000 Atchison, Topeka, & Santa Fe R. R. 5's, which were bought last year, amounting to $7,578.75, has been credited to the account of "railroad bond premiums" as a partial offset to the premium paid on purchase of the first mortgage bonds of the same road. The account of "railroad bond premiums" has been diminished during the year by the sum of $2,550, which was taken from the interest received upon $255,000 of seven per cent bonds bought before Sept. 1, 1880; and the same account has been increased by the amount of premiums paid on $272,000 of seven per cent railroad bonds bought during the year. The purchases of railroad bonds during the year have been made at prices which yield on the average a little more than five per cent income after allowing for sinking the premiums before maturity. The bonds were all of the highest class, and most of them provide for payment of both interest and principal in gold. All other changes in the investments of the University are accounted for by the receipts and payments hereinafter stated in detail. The most important investment has been the purchase of the Gray estate, on the corner of Washington and Summer Streets, from the executors of the late John C. Gray. Although the price paid for this estate was large, the fact that the College owned the adjoining store on Washington Street, and the extreme price at the time of all other investments suitable for the College, decided the Corporation to make the purchase with the hope that in the long run such a property could be made to pay a fair return. The amount still held by the Corporation in short-dated notes and mortgages is considerable, and the improvement in the market-value of money since the end of our financial year gives hope that a more favorable time for investment is at hand.

The net income of the general investments ($174,035.29) has been divided at the rate of $5\frac{36}{100}$ per cent among the Funds to which they belong, except the Sever Hall and Medical School Building Funds, which have recived a special rate of four per cent on their balances during the period of construction. The balance of $12.17 has been placed to the credit of the University account.

The rate of income this year as compared with that for 1879–80 shows a falling off of $\frac{29}{100}$ of one per cent, due to the extraordinarily low rate of interest which prevailed during the greater part of the year, and to large outlays upon the productive real estate. Although most of these outlays were for improvements, they could not safely be charged to capital, as competition with newer buildings is steadily raising the standard required to satisfy good tenants. It is probable that the rate of income for 1881–82 will be above five per cent, but the Corporation cannot, without taking undue risk, hope to get an average rate much above that paid upon the best mortgages or railroad bonds, and some accident may at any time cause a serious loss of income.

The following table shows the income available for the departments dependent upon the College proper, and the expenditures in those departments: —

Interest on funds for		
University Salaries and Expenses,	$20,969.85	
College Expenses,	1,688.40	
Library,	1,387.66	
College Salaries,	28,471.48	
Gymnasium, and repairs on College buildings,	none.	
College Term bills,	157,869.63	
Sundry cash receipts,	6,182.31	
		216,569.33
Expended for		
University Salaries and Expenses,	$31,975.77	
College Expenses,	37,225.24	
Library Salaries and Expenses (not books),	21,194.52	
College Salaries,	140,003.51	
Gymnasium Expenses,	4,542.50	
Repairs and insurance on College Buildings not valued on Treasurer's books,	16,096.98	
		251,038.52
Balance, showing deficit for the year, which has been charged off to Stock Account,		$34,469.19

In the University, College, and Library accounts the loss of income from invested property, offset only in part by a gain from tuition fees, largely increased expenses for the heating and care of buildings, an increase of salaries, due both to promotions and new appointments, and very heavy outlays for the completion of the improvements on the College Yard and buildings which were mentioned in detail in the last annual report, have left a deficit of $34,469.19, which sum has been taken from the unrestricted capital of the University. This deficit is the necessary result of steadily improving the quality of the work done by the University while the income has been falling off. The pressure upon the Corporation to make improvements in every direction is constant, and the improvements recently made were much needed. They were undertaken at a time when there had been no serious deficit for several years, and when there was fair ground for hope that they might be largely paid for out of income. The Corporation had to choose between the risk of consuming a part of its unrestricted capital, and the certainty of crippling the University in its effort to do the work reasonably expected of it. The risk was taken with the full understanding that consumption of capital could not be allowed to go on for more than one or two years, but with confidence that the large and wealthy body of alumni and friends of the University would continue to provide the means for its reasonable growth and improvement. While about one half of the deficit is due to very unusual expenditures, nearly one half of it is chargeable to outlays in the nature of current expenses. For the year 1881–82 there must be again a large deficit, as the result of engagements already made, but the Corporation have a reasonable expectation of bringing the expenditure within the income during the year 1882–83, partly through an increase of income and partly, if necessary, by cutting off some desirable outlays. There can be no doubt, however, that the present free income of the University is quite insufficient for its suitable maintenance, if it is to continue to do well the work already undertaken.

The unrestricted capital of the University has been further drawn upon for the purchase of the Royal Morse estate on Holmes Place at a cost of $16,873. This purchase was made in order to get a good site for the new building for the Law School.

Sever Hall has been finished during the year and all the bills incurred for its construction and furnishing have been paid. The Sever Hall Fund, with the interest earned on it, has covered the entire cost of the building, including the grading immediately around it, and of some part of the furniture. The number of chairs and tables required for so large a recitation building was very great, and the Corporation deemed it proper to complete the furnishing in a durable manner by taking the sum of $11,000 from the principal of Mrs. Sever's unrestricted legacy. The completion of Sever Hall made it necessary for the College to spend considerable money for the grading of the quadrangle between University Hall and Sever Hall, before laying out the pathways and driveway for that part of the College Yard, and this outlay has largely increased the account of College Yard expenses during the year.

In the Divinity School the income from the new endowments has made a surplus of $2,217.41, in spite of some loss of income from rent of rooms. For 1879–80 there was a surplus of $2,349.93.

In the Law School there is a surplus of $675.77, notwithstanding a considerable loss in tuition fees. For 1879–80 there was a surplus of $1,767.15.

The Medical School has made a surplus of $5,946.69, in spite of a considerable loss in tuition fees and a very large increase in expenditure for salaries. The outlay for repairs has been much less than during the preceding year. For 1879–80 the surplus was $10,377.54.

In the Dental School there is a surplus of $304.43, a large gain in tuition fees having more than covered the increase of expenses. This surplus has been used to reduce the debt of the School. For 1879–80 there was a surplus of $244.63.

In the Lawrence Scientific School there is a surplus of $3,041.35, chiefly due to a very large increase in the number of students, which has also allowed the School to contribute more than heretofore toward its share of the salaries of officers employed jointly by the School and the College. This surplus has been used to reduce the debt of the School. For 1879–80 there was a surplus of $639.17. The payment in full of the Erie Basin Dock bonds, with all the overdue interest, has given the Sturgis Hooper Professor his full salary for the year, besides making up the deficits of his salary and allowance for expenses during the past two years. Mr. Agassiz has during the year personally repaid the sum of $6,559.50, borrowed from the College last year for the Agassiz Building Fund, and made advances to the Fund, amounting to $33,835.50, by a cash payment of $5,835.50 and the sum of $28,000 borrowed from the Agassiz Memorial Fund, for which he gave his own notes duly endorsed. The sum of $6,341.25 from the income of the Agassiz Memorial Fund has been used to repay in part a note given by Mr. Agassiz to the Memorial Fund for advances before Sept. 1, 1879. The whole amount of $33,835.50 has been spent during the year upon the extension of the Museum building under the supervision of Mr. Agassiz, whose continued liberality has provided for many other outlays needed at the Museum.

In the Observatory increased expenses have consumed all the subscriptions for current use received within the year and left a deficit of $1537.22, which has been met out of the subscriptions for current use paid in advance during the year 1878–79. For 1879–80 there was a surplus of $700.95.

In the Bussey Institution an increase of salary payments and a falling off in fees and gifts have left a deficit of $2160.30, which has consumed the surplus of the previous year and made it necessary to take the sum of $1,512 from the unrestricted capital of the Bussey Building Fund. The increase of salary payments was made in the hope that a larger net income from the Bussey Trust might be received within the year. For1879–80 there was a surplus of $648.30.

The improvement in the Bussey Trust mentioned in the last annual report has continued, but a considerable increase in rents received during the year has been wholly consumed by largely increased taxes and the outlays required to fit the stores for new tenants. For the future the outlook is hardly as good as it was a year ago, although it is probable that the net income for 1881–82 will be larger than it has been during the past year.

Gifts have been received during the year as follows:—

TO FORM NEW FUNDS OR INCREASE OLD ONES.

From Edward Russell, Esq., $125, to increase the scholarship founded by him.

From an anonymous friend, $20,000, for retiring allowances to officers of the University.

From Mrs. Samuel Hooper, $30,000, to increase the principal of the Sturgis Hooper Professorship Fund.

From the executor of and trustee under the will of Henry Bartlett, $5000, "to found or establish a scholarship, the income only to be used in aid of meritorious undergraduates who may require such assistance."

From the family of the late Oliver Ames, $17,000, for the further endowment of the Divinity School.

From the executors of John C. Gray, $25,000, as an unrestricted legacy.

From the executors of Rev. Daniel Austin, $2100 additional, on account of bequest of $7000, "to be used for some good College purpose or purposes at the discretion of the College government and their successors."

From the executors of Rev. Daniel Austin, $300 additional, on account of bequest of $1000, for the Divinity School.

From the committee appointed to raise a fund for a memorial at Harvard College to the late Rev. Dr. James Walker, the sum remaining in their hands amounting with interest to $9977.53, for the foundation of the James Walker Fellowship.

From the executor of John B. Barringer, $5000 additional, on account of his bequest for the benefit of the chemical department of the Lawrence Scientific School.

From the executor of Edward M. Barringer notice was received of a bequest for the benefit of the Medical School. $750 on account was received during the year.

Subscriptions for the endowment of a Physical Laboratory: —

Dr. W. S. Bigelow	$500
John L. Bremer	500
James C. Fisk	1000
John L. Gardner	1000
John L. Gardner, Jr.	1000
James J. Higginson	$2000
E. W. Hooper	500
Percival Lowell	500
F. H. Peabody	250
O. W. Peabody	100
	$7350

Subscriptions for the further endowment of the Divinity School, paid to Sept. 1, 1881, as by list following: —

Abbot, Prof. Ezra	$100.
Allen, Rev. Joseph H.	40.
Alley, John B.	100.
Ball, Phinehas	50.
Barrows, Rev. S. J.	33.33
Bellows, Rev. Henry W.	100.
Bixby, Rev. James T.	33.33
Bond, Rev. H. F.	10.
Bowditch, J. Ingersoll	400.
Brown, Rev. H. W.	10.
Caldwell, Rev. J.	15.
Chase, Mrs. Theodore, Sen.	100.
Clarke, Rev. James Freeman	100.
Cobb, Samuel C.	50.
Collyer, Rev. Robert	25.
De Normandie, Rev. James	100.
Dillingham, Rev. Pitt	12.50
Dole, Rev. C. F.	$25.
E. E.	15.
Eliot, Charles W.	100.
Endicott, William, Jr.	500.
Everett, Prof. C. C.	100.
Fay, Mrs. Sarah S.	500.
Felton, S. M.	500.
Fitchburg, First Parish,	35.75
Fish, Rev. William H.	10.
Foote, Rev. Henry W.	100.
Gilman, Rev. N. P.	10.
Gordon, Rev. G. E.	10.
Hall, Rev. Edward H.	30.
Hall, Miss Harriet W.	20.
Hawes, Mrs. Susan F.	25.
Heywood, Rev. John H.	75.
Hoar, E. R.	100.

(Continued.)

Subscriptions for the Divinity School (continued): —

Horn, Samuel	$3.
Lee, Henry	300.
Leonard, Rev. George	25.
Lincoln, D. W.	200.
Lippett, Henry	100.
Lyman, Arthur T.	5000.
Lombard, Rev. Charles P.	5.
Meakin, Rev. Frederick	20.
Milton, First Religious Society, through Rev. Frederick Frothingham	5.
Muzzey, Rev. A. B.	100.
Newell, Rev. William	20.
Osgood, Rev. E. Q. S.	5.
Penhallow, Lucy E.	2.
Pierce, Samuel B.	$100.
Putnam, George	100.
Reed, Milton	50.
Richmond, Miss Caroline	500.
Seward, Rev. J. L.	50.
Silsbee, Rev. William	20.
Stewartt Rev. Samuel B.	25.
Tapley, Amos P.	100.
Tebbetts, Charles B.	50.
Thacher, Rev. R. P. E.	10.
Thayer, Rev. George A.	50.
Toy, Prof. C. H.	100.
Wendte, Rev. C. W.	50.
Wheildon, William W.	50.
	$10,474.91

Subscriptions for the increase of the Botanic Garden Fund, paid to September 1, 1881, from

A friend	$100
A friend	200
Anonymous	10
Agassiz, Alexander	1000
Ames, Frederick L.	5000
Amory, Mrs. W. C.	30
Appleton, T. G.	500
Baker, Ezra H.	100
Beal, James H.	100
Bigelow, Dr. W. S.	500
Blake, Mrs. S. P.	5
Brooks, Mrs. Peter C.	500
Brooks, Mrs. Shepherd	200
Coolidge, J. Randolph	100
Cummings, John	1000
Endicott, William, Jr.	1000
Gardner, George	500
Gardner, John L.	5000
Guild, Miss A. H.	10
Howes, Miss Elizabeth	$250
Loring, Miss K. P.	10
Lowell, Augustus	500
Lowell, George G.	50
Lyman, Arthnr T.	100
Peabody, F. H.	250
Peabody, O. W.	100
Phillips, John C.	2500
Pierce, Henry L.	100
Pratt, Miss Mary	400
Salisbury, Stephen	4000
Sargent, Henry W.	100
Schlesinger, Mrs. S. B.	50
Shaw, Quincy A.	5000
Wales, Miss M. A.	100
Walcott, Dr. H. P.	200
Ware, Dr. and Mrs. Charles E.	500
Wolcott, Mrs. J. H.	100
	$30,165

GIFTS FOR IMMEDIATE USE.

A gift of $5 from Dr. S. S. Silva for the Dental School has been treated as a gift for current use, but will next year be paid over to the proposed Endowment Fund for the Dental School.

Subscriptions for Chinese Instruction, paid to Sept. 1, 1881, from

Martin Brimmer	$333.33
D. O. Clark	166.66
George B. Dixwell	333.
A. A. Low	$500.
E. R. Mudge	333.33
George C. Richardson	333.33
	$1,999.65

Subscriptions for the Observatory, paid to Sept. 1, 1881, from

Adams, Charles Francis	$100
Ames, Fred. L.	100
Beal, James H.	50
Bremer, John L.	100
Brimmer, Martin	100
Cabot, W. C.	50
Choate, Charles F.	100
Coolidge, T. Jefferson	100
Curtis, Charles P.	100
Dalton, Charles H.	50
Davis, James	100
Emerson, G. B.	150
Fay, R. S.	50
Forbes, Mrs. J. M.	200
Forbes, J. M.	100
Gardner, George	50
Gardner, John L.	100
Grew, Henry S.	50
Grover, W. O.	150
Hemenway, Mrs. A.	100
Higginson, George	100
Hooper, Mrs. S.	100
Hunnewell, H. H.	100
Lodge, Mrs. Anna C.	50
Lowell, Augustus	50
Mudge, E. R.	100
Norcross, Otis	100
Paine, Charles J.	50
Payson, Samuel R.	50
Pickering, E. C.	200
Pickman, William D.	100
Phillips, John C.	100
Robbins, R. E.	50
Sears, Mrs. David	100
Sears, F. R.	50
Shattuck, G. O.	50
Shaw, Mrs. Cora L.	30
Thayer, Nathaniel	100
Upham, George P.	50
Weld, W. G.	50
Wheelwright, A. C.	50
Wigglesworth, Misses	100
Winthrop, Robert C.	50
	$3,680

From George W. Wales, Esq., $200, for books for the Library, in continuance of former gifts for the same purpose.

From an anonymous friend, $500, to increase the salary of the Professor of Entomology.

From William B. Weeden, Esq., $100, to aid in publishing Library Bulletins.

And from Henry Lee, Esq., $50, for the same purpose.

From John Amory Lowell, Esq., $1,000, for immediate use at the Botanic Garden.

From H. H. Hunnewell, Esq., $497.58, for a new boiler for greenhouses of the Botanic Garden.

From the Dante Society, $50, for the purchase of books on Dante.

From Assistant Professor Jacquinot for books for the Library $12.80.

Subscriptions towards the fund for the new building for the Medical School, paid to Sept. 1, 1881, from

A friend	$20
Ames, Oliver	500
Appleton, T. G.	1,000
Appleton, W. S.	500
Atkins, E.	1,000
Bartlett, F.	1,000
Beal, James H.	250
Bethune, Dr. G. A.	200
Bigelow, Dr. W. S.	4,000
Billings, R. C.	250
Blake, George B.	250
Brimmer, Martin	500
Burnham, T. O. H. P.	3,000
Chase, Mrs. Theodore, Sen.	100
Cobb, Samuel C.	50
Dexter, F. Gordon	5,000
Endicott, William, Jr.	1,000
Fisk, James C.	500
Fisk, Mrs. F. L.	100
Flagg, Augustus	100
Foster, C. O.	100
Gardner, John L.	1,000
Grover, W. O.	1,000
Haven, Trust Estate of H. P.	1,000
Higginson, F. L.	25,000
Higginson, George	5,000
Howes, Elizabeth	1,000
Hunnewell, H. H.	$1,000
Jackson, C. C.	500
Kidder, H. P.	2,000
King, G. P.	500
Lee, Henry	10,000
Merriam, C.	500
Milliken, Henry	200
Morse, E. R.	100
Morse, Leopold	250
Nickerson, G. A.	5,000
Nickerson, Miss Josephine	5,000
Payson, G. R.	100
Peabody, F. H.	250
Peabody, O. W.	200
Pickman, W. D.	500
Rice, Alex. H.	100
Richardson, G. C.	500
Saltonstall, Henry	500
Schlesinger, S. B.	200
Schlesinger, B.	500
Thatcher, Isaac	100
Thayer, Nathaniel, Jr.	5,000
Wales, George W.	100
Ware, Dr. C. E.	300
Wheelwright & Anderson	500
Whitney, D. R.	100
Wolcott, J. H.	100
	$87,520

From George Higginson, Esq., Treasurer of the Medical School Building Fund, $86,954, being the balance remaining in his hands of the old subscriptions, with the interest earned thereon.

For Lecturer on Political Economy, through William Gray, Esq., Treas., $150.

The total amount of these gifts for immediate use is $182,719.03, as is also stated in the account on page 16 of this report.

OTHER GIFTS.

From Prof. Josiah P. Cooke, for the College Library, "A collection of most of the original papers published by the officers of the Laboratory during the past ten years, and chiefly during the last five years.

From the executors of Thomas Carlyle, the books used by him in writing on Cromwell and Friedrich.

From the committee appointed to raise a fund for a memorial at Harvard College to the late Rev. Dr. James Walker, a mural tablet, erected in Memorial Hall at a cost of $1,515.67.

EDWARD W. HOOPER,
Treasurer.

BOSTON, Dec. 19, 1881.

General Statement of Receipts and Disbursements for the year ending

INCOME.

Interest on notes, mortgages, and advances,		$59,922.73
“ “ United States 6% Bonds,		3,000.00
“ “ “ “ 5% “		562.50
“ “ Massachusetts 5% Bonds,		4,254.03
“ “ Policy Mass. Hospital Life Insurance Co.,		200.00
“ “ Erie Basin Dock and Warehouse Co. Bonds,		4,025.00
“ “ New Boston Coal Mining Co. Bond,		350.00
“ “ Railroad Bonds (after deductions for sinking premiums).		
Atchison, Topeka, & St. Fe, 5%,	$4,526.24	
“ “ “ “ 7%,	4,723.17	
Buffalo, Bradford, and Pittsburg,	4,200.00	
Burlington & Mo. River in Iowa, 7%,	3,681.44	
“ “ “ in Nebraska,	2,996.83	
Chicago, Burlington, and Quincy,	1,940.94	
Eastern,	2,762.50	
Ionia and Lansing, 1st Mortg., 8%,	7,577.06	
“ “ “ 2d “ 8%,	1,400.00	
Kan. City, St. Joseph & Council Bluffs, 7%,	2,552.78	
Kansas City, Topeka, & Western, 7%,	34.50	
Michigan Southern & Northern Indiana,	70.00	
Nebraska,	4,493.84	
New York Central,	1,680.00	
Lincoln & No. Western, 7%,	306.25	
Republican Valley,	11,776.51	
		54,722.06
“ “ Municipal Bonds.		
Cincinnati,	140.00	
Minneapolis,	160.00	
		300.00
Dividends on Stocks.		
Charles River National Bank,	480.00	
First (Cambridge) “ “	400.00	
Fitchburg “ “	192.00	
Massachusetts “ “	144.00	
Merchants “ “	1,584.00	
New England “ “	259.00	
Old Boston “ “	400.00	
Schenectady “ “ (N. Y.),	200.00	
Bank taxes refunded,	1,037.73	
		4,696.73
Amoskeag Manufacturing Co.,	1,200.00	
New Bedford Copper “	15.00	
Massachusetts “ “	420.00	
Merrimack “ “	1,700.00	
Nashua “ “	1,440.00	
Pacific Mills “ “	4,000.00	
Stark Mills “ “	960.00	
Wamsutta “ “	640.00	
		10,375.00
Amount carried forward,		$142,408.05

by the Treasurer of Harvard College,
August 31, 1881.

EXPENSES.

Paid to account of Expenses in the		
University, as per Table I. (page 32),		$37,374.84
College, " " II. (page 34).		
Salaries for instruction,	$140,003.51	
Repairs,	15,578.65	
Insurance on College Edifices, not valued on Treasurer's books,	518.33	
General Expenses,	37,225.24	
Scholarships,	25,637.79	
Beneficiaries,	2,206.60	
Prizes for Reading, &c.,	1,228.81	
Botanic Garden,	6,044.01	
Herbarium,	335.00	
Gymnasium,	4,542.50	
		233,320.44
Library, as per Table III. (page 39).		
Books,	10,969.64	
Salaries and other expenses,	21,194.52	
		32,164.16
Divinity School, as per Table IV. (page 40).		
Salaries and other expenses,	15,276.61	
Scholarships and Beneficiaries,	975.88	
		16,252.49
Law School, as per Table V. (page 42),		26,522.51
Medical School, as per Table VI. (page 43),		65,101.30
Dental School, as per Table VII. (page 44),		3,709.55
Lawrence Scientific School, as per Table VIII. (page 45).		
Salaries and other expenses,	22,231.49	
Museum of Comparative Zoölogy,	53,825.11	
		76,056.60
Observatory, as per Table IX. (page 46),		17,448.33
Bussey Institution, } as per Table X. (page 46),	7,205.61	
Arnold Arboretum, } as per Table X. (page 46),	4,983.22	
		12,188.83
Amount carried forward		$520,139.05

General Statement of Receipts and Disbursements for the year ending

INCOME.

Amount brought forward, . .		$142,408.05
Dividends on Stocks (continued).		
Chicago, Burlington, and Quincy R. R.,	2,880.00	
Pittsfield and North Adams Railroad, . .	315.00	
Quincy Railroad Bridge Company, . . .	100.00	
Pittsburg, Ft. Wayne, & Chicago R. R.,	350.00	
		3,645.00
Real Estate, from rents, &c. (gross receipts).		
Cambridge (Houses and Lands), ...	35,965.20	
Boston (general investments), ...	43,238.10	
Bussey stores, ...	27,519.24	
Sundry estates, ...	6,875.79	
		113,598.33
Term Bills.		
College, as per Table II., ...	157,869.63	
Divinity School, as per Table IV., ...	2,334.05	
Law School, as per Table V., ...	22,267.50	
Medical School, as per Table VI., ...	50,323.37	
Dental School, as per Table VII., ...	2,905.83	
Lawrence Scientific School, as per Table VIII., .	6,870.00	
Bussey Institution, as per Table X., ...	580.00	
		243,150.38
Sundries.		
From Wm. Pennoyer Annuity, ...	277.50	
Trustees of Thayer Scholarships, ...	3,600.00	
" Count Rumford's Legacy, . . .	577.94	
" Edward Hopkins, ...	231.02	
Pew rents in Appleton Chapel, ...	195.00	
For use of Library by resident graduates and others,	175.00	
Degrees of A.M., Ph.D., and S.D., ...	270.00	
Degree of Bachelor of Arts out of course, and Examination fees, ...	706.50	
Fees in Infirmary and Laboratory, Dental School, .	788.15	
Printing by College Press for other Departments, .	795.02	
Sales of grass and old material, ...	238.54	
Sales of old examination papers, ...	22.00	
Sale of time signals from Observatory, ...	3,091.67	
Sale of tickets to Commencement Dinner of 1881, .	586.00	
Sale of books, pamphlets, catalogues, &c., ...	328.39	
Use of Sanders Theatre by Societies, ...	278.58	
Use of lockers at Gymnasium, ...	1,135.00	
Returned by Beneficiaries, ...	597.20	
Fees for instruction in Chinese, ...	37.50	
Fee for use of Gymnasium, ...	10.00	
Physical Laboratory, from students, ...	180.00	
		14,121.01
Sundry gifts for immediate use, see page 12, ...		182,719.03
Amount carried forward, . . .		$699,641.80

by the Treasurer of Harvard College,
August 31, 1881.

EXPENSES.

Amount brought forward,			$520,139.05
Real Estate, expenses.			
Insurance.			
Cambridge,	$127.50		
Boston,	747.24		
Bussey stores,	395.25		
		1,269.99	
Taxes.			
Cambridge,	2,449.92		
Boston,	6,216.80		
Bussey stores, &c.,	7,385.27		
		16,051.99	
Interest.			
Cambridge (on advances),	420.00		
Bussey stores (on advances),	2,028.31		
		2,448.31	
Repairs, improvements, care, cleaning and sundries.			
Cambridge,	13,833.92		
Boston,	3,707.86		
Bussey stores,	1,367.43		
		18,909.21	
Heating and hoisting for Bussey stores,	4,649.94		
Less for sales of heat and power,	2,210.00		
		2,439.94	
			41,119.44
Annuities.			
Bussey,		6,800.00	
Gore,		900.00	
Mary Osgood,		360.00	
Lucy Osgood,		780.00	
Class of 1802,		120.00	
Anonymous,		720.00	
Bemis,		2,832.50	
			12,512.50
Sundry payments from income.			
To the Treasurer of the Museum of Fine Arts, from Gray Fund for Engravings,		875.00	
For engravings from accumulated income of Gray Fund for Engravings,		4,393.00	
The income of the Daniel Williams Fund for the benefit of the Herring Pond and Mashpee Indians,		835.10	
The income of the Sarah Winslow Fund, to the Minister and Teacher at Tyngsboro', Mass.,		266.64	
Salary of Chinese Instructor,		2,100.00	
To lecturer on Political Economy,		150.00	
			8,619.74
Amount carried forward,			$582,390.73

General Statement of Receipts and Disbursements for the year ending

RECEIPTS EXCLUSIVE OF INCOME.

Amount brought forward, ...			$699,641.80
GIFTS.			
Edward Russell Scholarship (additional), ...		125.00	
Daniel Austin Fund for College (part), ...		2,100.00	
" " " " Divinity School (part), . .		300.00	
Subscriptions for Divinity School, ...		10,474.91	
Oliver Ames Fund for Divinity School, ...		17,000.00	
Retiring Allowance Fund, ...		20,000.00	
James Walker Fellowship, ...		9,977.53	
John C. Gray Fund (unrestricted, ...		25,000.00	
Bartlett Scholarship, ...		5,000.00	
John B. Barringer Fund (additional), ...		5,000.00	
Edward M. Barringer Fund (part), ...		750.00	
Sturgis Hooper Fund (additional), ...		30,000.00	
Subscriptions for endowment of Botanic Garden, . .		30,165.00	
" " " " Physical Laboratory,		7,350.00	163,242.44
SALES.			
$31,000 Chicago, Burl. & Quincy R. R. 7% Bonds, .		39,990.00	
100,000 Atch., Topeka, & St. Fe " 5% " .		101,578.75	
50,000 Eastern " " .		54,750.00	
70,000 Ion. & Lans. R. R. 2d M. 8% Bonds (paid off),		70,000.00	
1,000 European & No. American R. R. Bond, .		747.50	
50,000 United States 6% 1881 Bonds, ...		50,375.00	
15,000 " " 5% " "		15,525.00	
20,000 Erie Basin Dock and W. Co. Bonds (paid off),		20,000.00	
4,000 Burl. & Mo. Riv. (Neb.) R. R. called bonds, paid off,		4,000.00	
Jarvis Estate, Baltimore, ...		11,666.66	368,632.91
SUNDRIES.			
Notes and Mortgages paid off, ...	$1,350,916.90		
Less invested in Notes and Mortgages,	1,157,575.65	193,341.25	
Drafts on Baring Brothers & Co., . . .	12,455.14		
Less paid them on account, ...	10,627.44	1,827.70	
From Dining Hall Association, to reduce debt, . . .		1,500.00	
Advances to College Wharf repaid, ...		365.58	
" " accrued interest on bonds repaid, ...		8,573.37	
" " Agassiz Building Fund repaid, ...		6,559.50	
New " " " " " from Mr. Agassiz,		33,835.50	
" " premiums on railroad bonds repaid,			
from $255,000 seven per cent bonds, . . .	$2,550.00		
" 70,000 Ionia & Lansing 2d M. 8%,	1,400.00	3,950.00	249,952.90
Balance, September 1, 1880.			
Cash in Suffolk National Bank, ...		3,174.94	
Cash in hands of Allen Danforth, Bursar, ...		1,071.06	
Term Bills due October, 1880, ...		72,898.36	
" " over due, ...		2,746.49	79,890.85
			$1,561,360.90

by the Treasurer of Harvard College,
August 31, 1881.

EXPENSES.

Total of expenses brought forward, ...	$582,390.73

INVESTMENTS AND SUNDRY PAYMENTS.

Burl. & Mo. River (Neb.) R. R. 6% Bds.	$1,000	cost,	$1,042.50	
" " " " (Iowa) " L. G. 7% "	3,000	"	3,570.00	
Atch., Top. & St. Fe R. R. 7% Bds. 1st mort.	156,000	"	189,565.00	
Nebraska R. R. 7% Bonds, ...	14,000	"	16,310.00	
Ionia & Lans. R. R. 8% Bds., 1st mort.	11,000	"	12,642.50	
Kan. City, Top. & W. R. R. 7% Bds. 1st "	64,000	"	81,050.00	
Lincoln & No. Western R. R. 7% Bonds,	35,000	"	41,300.00	
Mass. 5% Bonds, 1894 (Paine Fund), .	4,000	"	4,660.00	
				350,140.00
Paid for accrued interest on above bonds, ...				5,588.26
" " Gray Estate, cor. Washington and Summer Sts., Boston,				475,000.00
" on account of improvements to Andrews Estate, ...				15,562.00
" " " " building Sever Hall and furnishing, ...				13,432.72
" " " " Mr. Agassiz's note from income of Memorial Fd.,				6,341.25
" for Morse Estate, Cambridge, ...				16,873.00
" on account of improvements to Gore Hall, ...				2,414.59

Balance, August 31, 1881.		
Cash in Suffolk National Bank, ...	19,063.38	
Cash in hands of Allen Danforth, Bursar, ...	1,131.61	
Term Bills due October, 1881, ...	71,163.80	
" " overdue, ...	2,259.56	
		93,618.35
		$1,561,360.90

The following Account exhibits the State of the Property, as embraced in the Treasurer's Books, August 31, 1881.

Notes and Mortgages.				
Mortgages			$478,479.36	
Long Wharf Co.'s Notes			55,000.00	
Phil., Wil. & Balt. R. R. Notes			50,000.00	
Chic., Burl'n & Quincy R. R. Notes			50,000.00	
Manufacturing Co.'s Notes			105,000.00	
Personal Notes (endorsed)			29,658.75	
				$768,138.11
Massachusetts 5% Bonds,	$91,000	valued at		94,050.00
New Boston Coal Mining Co. Bonds,	10,000	" "		9,000.00
Municipal Bonds.				
Cincinnati,	2,000.00	valued at	2,000.00	
Minneapolis,	2,000.00	" "	2,000.00	
				4,000.00
Railroad Bonds.				
Atch., Top., & St. Fé, 1st M., 7%,	206,000	val'd at	206,000.00	
Buffalo, Bradford, and Pittsburg,	60,000	" "	60,000.00	
Burl'n & Mo. River in Iowa, 7%,	72,000	" "	72,000.00	
" " " in Nebraska, 6%,	247,000	" "	251,412.25	
Ionia & Lansing, 1st Mortg., 8%,	103,000	" "	97,282.50	
Kan. City, St. Jos. & C.B. 1st M., 7%,	50,000	" "	50,000.00	
Kan. City, Top., & Western, 7%,	64,000	" "	64,000.00	
Lincoln & No. Western, 7%,	35,000	" "	35,000.00	
Michigan So. and No. Indiana,	1,000	" "	1,000.00	
Nebraska (guaranteed), 7%,	100,000	" "	100,000.00	
New York Central, 6%,	28,000	" "	27,000.00	
Railroad Bond Premiums,			86,837.73	
				1,050,532.48
Railroad Stock.				
Chicago, Burlington, and Quincy,	360	shares,	24,600.22	
Pittsburgh, Fort Wayne and Chicago,	50	"	5,000.00	
Pittsfield and North Adams,	63	"	6,300.00	
Quincy R. R. Bridge Co.,	10	"	1,250.00	
				37,150.22
Manufacturing Stock.				
Amory,	36	shares,	3,600.00	
Amoskeag,	12	"	10,800.00	
Massachusetts Mills,	7	"	6,600.00	
Merrimack,	17	shares,	17,000.00	
Nashua,	36	"	25,560.00	
New Bedford Copper Co.,	5	"	250.00	
Pacific Mills,	20	"	17,468.29	
Stark Mills,	12	"	11,900.00	
Wamsutta Mills,	80	"	8,880.00	
				102,058.29
Amount carried forward,				$2,064,929.10

Amount brought forward, ...			$2,064,929.10
Bank Stock.			
Charles River, ...	60 shares,	6,000.00	
First Cambridge, ...	50 “	5,000.00	
Fitchburg, ...	24 “	2,403.00	
Massachusetts, ...	12 “	3,000.00	
Merchants, ...	264 “	34,732.00	
New England, ...	37 “	3,896.00	
Old Boston, ...	200 “	8,933.00	
Schenectady (N. Y.), ...	40 “	2,200.00	
			66,164.00
Real Estate.			
Houses and Lands in Cambridge yielding income,		357,163.83	
Unimproved Lands in Cambridge, ...		75,487.79	
Bussey Real Estate in Boston and Dedham, . .		413,092.80	
Amory Estate, Franklin Street, Boston, . . .		165,615.81	
Webb Estate, Washington Street, Boston, . .		164,604.79	
Andrews Estate, Washington Street, Boston, .		165,562.00	
Gray Estate, Washington Street, Boston, . . .		475,000.00	
Estate on Hawley Street, Boston, ...		38,650.78	
Estate on Hawkins Street, “		29,476.09	
Ward's (Bumkin) Island, Boston Harbor, . .		1,200.00	
Reversion of Buildings on Brattle Street, Boston,		1,000.00	
			1,886,853.89
Sundries.			
In hands of Count Rumford's Trustees in Paris,		10,000.00	
Annuity of William Pennoyer, valued at . . .		4,444.44	
Policy of the Mass. Hospital Life Insurance Co.,		5,000.00	
Due from Dining Hall Association, ...		37,232.16	
“ “ Lawrence Scientific School, ...		4,905.14	
“ “ Bussey Trust, ...		40,566.13	
“ “ Dental School, ...		15,827.74	
Advances to Scudder's Catalogue, ...		233.42	
“ “ Chinese Subscription, ...		374.38	
Balance of account for decorating Appleton Chapel,		2,859.62	
“ “ “ “ repairing College Wharf,		411.88	
Term bills due October, 1881, ...		71,163.80	
“ “ overdue, ...		2,259.56	
			195,278.27
Cash in Suffolk National Bank, ...		19,063.38	
“ “ hands of Allen Danforth, Bursar, ...		1,131.61	20,194.99
			Total $4,233,420.25

The foregoing Property represents the following Funds and Balances, and is answerable for the same.

UNIVERSITY FUNDS.

Principal, Sept. 1, 1880.		Principal, Aug. 31, 1881.	
$151,043.08	Stock Account (so called), ...	$99,700.89	
141,638.74	Insurance and Guaranty Fund (so called),	141,638.74	
5,250.00	**Samuel D. Bradford** Fund, ...	5,250.00	
15,750.00	**Israel Munson** Fund, ...	15,750.00	
17,004.97	**Leonard Jarvis** Fund, ...	16,871.63	
1,435.12	**Peter C. Brooks** Fund for building a President's House, ...	1,250.44	
155.78	**Thomas Cotton** Fund, ...	155.35	
56,944.28	**John Parker** Fellowships, ...	57,596.48	
10,585.77	**Harris** Fellowships, ...	10,540.71	
12,407.81	**John Thornton Kirkland** Fellowship,	11,947.88	
	James Walker Fellowship, ...	9,999.83	
27,345.08	**Graduates'** Scholarship, ...	27,810.78	
1,517.22	**Sumner** Prize Fund, ...	1,598.53	
43,987.97	**Winn** Prof. of Ecclesiastical History, .	43,845.73	
20,000.00	**Sever** Fund (unrestricted)	9,000.00	
1,059.00	Gift for Pension System, now called Retiring Allowance Fund, ...	21,785.76	
150.00	**Robert N. Toppan** Prizes	150.00	
	John C. Gray Fund, ...	25,000.00	
			499,892.75

COLLEGE FUNDS.

27,748.64	**Alford** Professorship, ...	27,748.64	
28,337.40	**Boylston** "	28,337.40	
21,619.50	**Eliot** "	21,619.50	
10,000.00	" " (**Jon. Phillips's** gift),	10,000.00	
3,500.01	**Erving** "	3,500.01	
35,990.99	**Fisher** "	35,990.99	
20,217.08	**Hersey** "	20,217.08	
16,692.65	" " (**Thomas Lee's** gift),	17,587.39	
3,747.33	**Hollis** " (Mathematics), . .	3,747.33	
30,950.41	**Hollis** " (Divinity), . . .	32,609.33	
43,062.93	**McLean** "	43,062.93	
21,000.00	**Perkins** "	21,000.00	
25,020.19	**Plummer** "	25,020.19	
52,500.00	**Pope** "	52,500.00	
52,996.37	**Rumford** "	52,996.37	
23,139.83	**Smith** "	23,139.83	
16,240.38	Fund for Permanent Tutors, ...	16,240.38	
125,000.00	**Class Subscription** Fund, ...	125,000.00	
12,622.46	**Daniel H. Peirce** "	12,698.04	
1,825.76	**Paul Dudley** Fund for Lectures, . .	1,923.63	
31,500.00	**Jonathan Phillips** Fund (unrestricted)	31,500.00	
$1,109,986.75	. . . . . . Amounts carried forward,	$606,439.04	499,892.75

Principal, Sept. 1, 1880.		Principal, Aug. 31, 1881.	
$1,109,986.75	Amounts brought forward,	$606,439.04	499,892.75
1,050.00	**John A. Blanchard** Fd. (unrestricted)	1,050.00	
3,070.04	**John W. P. Abbot** " "	3,234.59	
3,640.04	**Daniel Austin** " "	5,600.00	
346.25	**Henry Flynt's** Bequest,	345.30	
2,568.70	**Abbot** Scholarship,	2,556.40	
788.98	**Alford** "	791.27	
	Bartlett "	5,100.50	
5,458.33	**Bassett** "	5,549.99	
11,950.12	**Bigelow** "	11,840.64	
95,270.22	**Bowditch** "	94,399.69	
2,742.20	**Browne** "	2,739.17	
7,105.59	**Class of 1802** Scholarship,	7,116.47	
3,154.69	" **1814** "	3,123.80	
4,964.11	" **1815** " (**Kirkland**),	4,980.18	
3,737.88	" **1817** "	3,738.24	
2,644.26	" **1835** "	2,635.98	
3,684.15	" **1841** "	3,706.61	
2,693.93	" **1852** " (**Dana**)	2,838.33	
5,987.90	**Crowninshield** "	6,308.86	
5,363.47	**W. S. Eliot** "	5,350.93	
2,435.31	**Greene** "	2,445.83	
5,746.15	**Hodges** "	6,054.14	
6,025.73	**Farrar** "	5,998.72	
5,127.58	**Levina Hoar** "	5,202.44	
4,831.61	**Hollis** "	4,840.61	
871.22	**Matthews** " (balance),	100.71	
7,829.15	**Morey** "	7,748.78	
6,565.66	**Pennoyer** "	6,576.85	
361.94	**Edward Russell** "	513.04	
3,934.87	**Saltonstall** " (Mary & Leverett),	3,845.79	
573.27	" " (Dorothy),	603.98	
5,288.75	**Slade** "	5,322.24	
3,177.38	**Sever** "	3,172.67	
9,388.77	**Sewall** "	9,392.02	
42,714.92	**Shattuck** "	43,099.32	
2,756.34	**Story** "	2,754.06	
4,188.71	**Gorham Thomas** "	4,163.24	
6,452.03	**Toppan** "	6,497.86	
25,278.15	**Townsend** "	25,183.05	
3,880.93	**Walcott** "	3,888.95	
7,775.15	**Whiting** "	8,191.89	
11,634.26	**Exhibitions,**	12,064.95	
1,760.06	**Senior Exhibition,**	1,764.40	
1,200.00	**Samuel Ward** Fund,	1,200.00	
955.07	**John Glover** Fund,	1,006.26	
2,037.80	**Rebecca A. Perkins** Fund,	2,147.04	
10,897.96	**Quincy Tufts** Fund,	10,923.08	
5,141.25	**Day** "	5,256.81	
10,235.49	**Munroe** "	10,226.59	
$1,475,273.12	Amounts carried forward,	$979,581.31	499,892.75

Principal, Sept. 1, 1880.		Principal, Aug. 31, 1881.	
$1,475,273.12	. . . Amounts brought forward,	$979,581.81	499,892.75
16,105.78	Lee Prizes for Reading,	15,899.06	
4,374.08	Boylston Prizes for Elocution,	4,348.53	
11,525.29	Bowdoin Prizes for Dissertations,	11,693.03	
1,000.10	Hopkins Gift for "Deturs,"	1.030.91	
22,562.45	Botanic Garden Fund,	52,127.57	
15,882.31	Mass. Fund for Botanic Garden,	15,882.31	
14,844.17	Herbarium Fund,	18,192.57	
125.00	Salary account (unexpended balance),	125.00	
	Physical Laboratory,	7,413.46	
			1,106,293.75
	LIBRARY FUNDS.		
10,706.95	Subscription for Library,	10,965.37	
2,084.39	Bowditch Fund,	2,100.50	
467.61	Bright "	1,516.34	
5,444.33	Denny "	5,574.63	
5,271.17	Farrar "	5,296.52	
3,180.85	Haven "	3,343.83	
5,370.08	Hayward "	5,563.56	
2,402.80	Hollis "	2,414.81	
2,116.78	Homer "	2,105.21	
5,463.03	Lane "	5,681.55	
62,117.78	Minot "	61,044.49	
5,286.80	Salisbury "	5,307.31	
20,214.53	Sever "	20,239.27	
4,127.84	Shapleigh "	4,247.32	
37,708.50	Sumner "	38,264.15	
5,010.83	Tucker "	5,031.18	
5,474.26	Ward "	5,708.75	
222.72	Wales "	124.67	
15,956.41	Walker "	16,292.28	
62.25	Sundry gifts, etc. (unexpended balances),	94.16	
			200,915.90
	LAW SCHOOL FUNDS.		
7,386.32	Law School (balance),	8,062.09	
15,750,00	Dane Professorship,	15,750.00	
23,979.82	Bussey "	23,979.82	
8,340.81	Royall "	8,340.81	
			56,132.72
	MEDICAL SCHOOL FUNDS.		
53,522.32	Medical School (balance),	59,469.01	
19,192.65	Jackson Medical Fund,	19,192.65	
14,836.70	Geo. C. Shattuck Fund,	17,129.20	
11,076.33	Warren Fund for Anatom'l Museum,	11,497.76	
4,246.52	Boylston Fund for Medical Prizes,	3,916.51	
2,049.25	" " " " Books,	2,159.08	
2,367.99	Medical Library Fund,	2,489.91	
1,219.55	Medical School Building Fund,	161,771.40	
2,000.00	Quincy Tufts Medical Fund,	2,000.00	
	Edward M. Barringer Fund,	765.06	
			280,390.58
$1,931,383.81	. . . . . Amounts carried forward,		$2,143,625.70

Principal, Sept. 1, 1880.		Principal, Aug. 31, 1881.	
$1,931,383.81	Amounts brought forward,		$2,143,625.70

DIVINITY SCHOOL FUNDS.

18,449.35	General Fund,	20,666.76	
37,583.74	**Bussey** Professorship,	37,583.74	
16,015.81	**Parkman** "	16,015.81	
6,008.43	**Hancock** "	6,008.43	
20,280.38	**Dexter** Lectureship,	20,280.38	
9,184.69	**Henry Lienow** Fund,	9,184.69	
5,250.00	**Mary P. Townsend** Fund,	5,250.00	
2,100.00	**Winthrop Ward** Fund,	2,100.00	
1,050.00	**Samuel Hoar** "	1,050.00	
1,050.00	**Abraham W. Fuller** Fund,	1,050.00	
1,050.00	**Caroline Merriam** "	1,050.00	
12,571.88	**Jackson** Foundation,	12,925.74	
2,177.95	**Joshua Clapp** Fund,	2,177.95	
1,050.00	**William Pomeroy** Fund,	1,050.00	
525.00	**Hannah C. Andrews** Fund,	525.00	
2,989.41	**J. Henry Kendall** Scholarship,	3,149.62	
2,688.46	**Nancy Kendall** "	2,832.54	
911.34	**Lewis Gould** Fund	911.34	
1,000.00	**Adams Ayer** "	747.50	
7,875.00	**Joseph Baker** "	7,875.00	
5,366.45	**Thomas Cary** Scholarships,	5,304.07	
2,129.05	**George Chapman** Scholarship,	2,196.50	
2,888.29	**Joshua Clapp** "	2,993.09	
1,505.89	Beneficiary money returned	1,586.61	
40,000.00	**Th. Tileston** of New York Endowm't	40,000.00	
67,438.78	**Henry P. Kidder** Fund,	10,000.00	
	Abby Crocker Richmond Fund,	1,000.00	
	New Endowment,	66,913.69	
	Oliver Ames Fund,	17,000.00	
500.00	**Daniel Austin** Fund,	800.00	
10,070.63	**Abner W. Buttrick** Fund,	10,610.44	
			310,838.90

LAWRENCE SCIENTIFIC SCHOOL FUNDS.

38,807.17	Professorship of Engineering,	38,807.17	
2,860.50	Professorship of Chemistry,	2,860.50	
61,536,43	**Abbott Lawrence** Fund,	61,536.43	
50,000.00	**James Lawrence** "	50,375.00	
25,686.85	**John B. Barringer** "	30,686.85	
69,995.00	**Sturgis Hooper** "	100,516.65	
50,000.00	**Gray** Fund for Zoölogical Museum,	50,000.00	
297,933.10	**Agassiz Memorial** Fund,	297,933.10	
7,594.01	Teachers' and Pupils' Fund,	7,594.01	
117,469.34	Permanent Fund,	117,469.34	
7,740.66	**Humboldt** Fund,	7,740.66	
			765,519.71
$2,940,717.40	Amounts carried forward,		$3,219,984.31

Principal, Sept. 1, 1880.		Principal, Aug. 31, 1881.	
$2,940,717.40	Amounts brought forward,		$3,219,984.31
	OBSERVATORY FUNDS.		
110,293.88	**Edward B. Phillips** Fund,	110,293.88	
21,000.00	**James Hayward** “	21,000.00	
21,257.19	**David Sears** “	21,826.88	
11,543.26	**Josiah Quincy** “	12,161.96	
2,000.00	**Charlotte Harris** “	2,000.00	
10,000.00	Anonymous Observatory Fund (at present charged with an Annuity),	10,000.00	
8,191.87	Observatory Subscriptions (balance),	6,654.65	
			183,937.37
	OTHER FUNDS FOR SPECIAL PURPOSES.		
413,092.80	**Bussey** Trust (income thereof, ½ to Bussey Institution, ¼ to Law School, and ¼ to Divinity School),	413,092.80	
50,706.25	**Bright** Legacy,	50,540.17	
24,104.51	**Robert Troup Paine** Fund,	24,858.54	
648.30	**Bussey** Institution,		
5,196.15	**Bussey** Building Fund,	3,684.15	
150,844.05	**James Arnold** “	151,248.31	
4,973.45	**Arnold** Arboretum	7,937.76	
42,000.00	**James Savage** “	42,000.00	
19,500.45	**Gray** Fund for Engravings,	15,692.86	
22,915.96	**Gore** Annuity Fund,	20,776.07	
7,281.40	**Mary Osgood** Annuity Fund,	7,311.66	
12,993.51	**Lucy Osgood** Annuity Fund,	12,909.99	
51,168.31	**Bemis** Annuity Fund,	51.015.81	
2,272.60	**Gospel Church** Fund,	2,394.43	
3,171.50	**John Foster** Fund (income to Law School, Divinity School, and Medical School, in turn),	3,171.50	
2,775.55	**Sever** Hall Building Fund,	465.31	
	Baring Bros. & Co. (balance due them),	1,479.43	
			808,578.79
	FUNDS IN TRUST FOR PURPOSES NOT CONNECTED WITH THE COLLEGE.		
16,069.19	**Daniel Williams** Fund for the conversion of the Indians,	16,095.39	
4,838.50	**Sarah Winslow** Fund, forthe Minister and Teacher at Tyngsborough, Mass.,	4,824.39	
			20,919.78
$3,959,556.08			$4,233,420.25

Changes in the Funds during the year ending August 31, 1881.

Total amount of Funds, August 31, 1881, as before stated,	$4,233,420.25	
Total amount of Funds, September 1, 1880, as before stated,	3,959,556.08	
Showing a total increase during the year of		$273,864.17
Which is made up as follows: —		
Gifts forming new Funds or increasing old ones,	163,242.44	
Increase more than decrease of Funds and balances, which appear both at the beginning and end of the the year,	176,282.18	
Increase of Funds established during the year, and balances created during the year,	1,680.75	
Increase of specially invested Funds by gain from change of investment,	900.00	342,105.37
Deduct from this amount for		
Stock Account, this year's deficit charged off, being excess of expenditure over income of College, Library, and University accounts,	34,469.19	
cost of Morse Estate, Cambridge, charged off,	16,873.00	
Decrease of specially invested Funds, by loss from change of investment,	385.84	
Gore Annuity Fund, part of principal spent,	2,414.59	
Sever Hall Fund, " " "	2,310,24	
Sever unrestricted Fund, " "	11,000.00	
Bussey Institution, balance used up,	648.30	
Daniel Austin Fund, income of 1879–80 used by Library in 1880–81,	140.04	68,241.20
		$273,864.17

Net increase of Funds, which appear at the beginning and end of the year, as above,	176,282.18	
Increase of other Funds as above, excluding gifts,	2,580.75	178,862.93
Less deduction as above,		68,241.20
Leaving amount of the net increase of the Funds and balances, excluding gifts, for capital account, as is also shown in the following table,		$110,621.73

Statement showing Changes in the Different

Increase of Funds which appear both at the beginning and the end of the year, being the excess of income (including gifts for immediate use) over payments towards the special objects of those Funds.

John Parker Fellowships,	652.20
Graduates' Scholarship,	465.70
Sumner Prize Fund,	81.31
Retiring Allowance Fund,	726.76
Hersey Professorship (Thomas Lee's gift),	894.74
Hollis "	1,658.92
Daniel H. Peirce Fund,	75.58
Paul Dudley Fund for Lectures,	97.87
John W. P. Abbott Fund,	164.55
Alford Scholarship,	2.29
Bassett "	91.66
Class of 1802 Scholarship,	10.88
" 1815 "	16.07
" 1817 "	.36
" 1841 "	22.46
" 1852 "	144.40
Crowninshield "	320.96
Greene "	10.52
Hodges "	307.99
Levina Hoar "	74.86
Hollis "	9.00
Pennoyer "	11.19
Edward Russell "	26.10
Saltonstall " (Dorothy),	30.71
Slade "	33.49
wall "	3.25
Shattuck "	384.40
Toppan "	45.83
Walcott "	8.02
Whiting "	416.74
Exhibitions,	430.69
Senior Exhibition,	4.34
John Glover Fund,	51.19
Rebecca A. Perkins Fund,	109.24
Quincy Tufts Fund,	25.12
Day Fund,	115.56
Bowdoin Prizes for Dissertations,	167.74
Hopkins Gift for "Deturs,"	30.81
Herbarium Fund,	607.56
Subscription for Library,	258.42
Bowditch Book Fund,	16.11
Bright " "	1,048.73
Denny " "	130.30
Farrar " "	25.35
Amount carried forward,	$9,809.97

Funds during the year ending August 31, 1881.

Decrease of Funds, which appear both at the beginning and the end of the year, being the excess of payments over income received (including gifts for immediate use) for the special objects of those Funds.

Peter C. Brooks Fund,	$184.68	
Thomas Cotton "	.43	
Harris Fellowship,	45.06	
John Thornton Kirkland Fellowship,	459.93	
Winn Professorship of Ecclesiastical History,	142.24	
Henry Flynt's Bequest,	.95	
Abbot Scholarship,	12.30	
Bigelow "	109.48	
Bowditch "	870.53	
Browne "	3.03	
Class of 1814 Scholarship,	30.89	
" **1835** "	8.28	
W. S. Eliot "	12.54	
Farrar "	27.01	
Matthews " (balance),	770.51	
Morey "	80.37	
Saltonstall " (**Mary & Leverett**),	89.08	
Sever "	4.71	
Story "	2.28	
Gorham Thomas "	25.47	
Townsend "	145.10	
Munroe "	8.90	
Lee Prizes for Reading,	206.72	
Boylston Prizes for Elocution,	25.55	
Botanic Garden Fund,	599.88	
Homer Book "	11.57	
Minot " "	1,073.29	
Wales " "	98.05	
Boylston Fund for Medical Prizes,	330.01	
Thomas Cary Scholarships,	62.38	
Observatory Subscriptions (balance),	1,537.22	
Bright Legacy,	166.08	
Bussey Building Fund,	1,512.00	
Gray Fund for Engravings,	4,332.59	
Lucy Osgood Annuity Fund,	83.52	
Bemis Annuity Fund,	152.50	
Sarah Winslow "	14.11	
		13,239.24
Stock Acc't, cost of Morse Estate, Cambridge, charged off,	16,873.00	
" " this year's deficit " "	34,469.19	
		51,342.19
Adams Ayer Fund, loss from change of investment,	252.50	
Leonard Jarvis " " " " " "	133.34	
		385.84
Amount carried forward,		$64,967.27

Statement showing Changes in the Different

Amount brought forward, . .	$9,809.97	
Haven Book Fund, ...	162.98	
Hayward " "	193.48	
Hollis " "	12.01	
Lane " "	218.52	
Salisbury " "	20.51	
Sever " "	24.74	
Shapleigh " "	119.48	
Sumner " "	555.65	
Tucker " "	20.35	
Ward " "	234.49	
Walker " "	335.87	
Sundry gifts for Books (unexpended balances),	31.91	
Law School (balance), ...	675.77	
Medical School (balance), ...	5,946.69	
Warren Fund for Anatomical Museum, ...	421.48	
Boylston Fund for Medical Books, ...	109.88	
Medical Library Fund, ...	121.92	
Medical School Building Fund, ...	160,551.85	
Divinity School (general fund), ...	2,217.41	
Jackson Foundation, ...	353.86	
J. H. Kendall Scholarship, ...	160.21	
Nancy " "	144.08	
George Chapman "	67.45	
Joshua Clapp "	104.80	
Divinity School Beneficiary money returned, .	80.72	
Abner W. Buttrick Fund, ...	539.81	
Sturgis Hooper "	521.65	
David Sears "	569.69	
Josiah Quincy "	618.70	
Robert Troup Paine "	754.03	
James Arnold "	404.26	
Arnold Arboretum "	2,964.31	
Gore Annuity "	274.70	
Mary Osgood Annuity "	30.26	
Gospel Church "	121.83	
Daniel Williams "	26.20	
		189,521.42
Increase of Funds established during the year.		
James Walker Fellowship, ...	22.30	
Physical Laboratory Subscription, ...	63.46	
Bartlett Scholarship, ...	100.50	
Edward M. Barringer Fund, ...	15.06	
		201.32
Baring Bros. & Co. credit balance created, ...		1,479.43
Gray Fund for Engravings, gain from change of investm't,	525.00	
James Lawrence Fund, " " " " "	375.00	
		900.00
Amount carried forward, ...		$192,102.17

Funds during the year ending August 31, 1881. (*Continued.*)

Amount brought forward,		$64,967.27
Gore Annuity Fund, spent on improving Gore Hall, out of principal,	2,414.59	
Sever Hall Fund, spent on building, out of principal,	2,310.24	
Sever Fund, spent on furniture, etc. for Sever Hall, out of principal,	11,000.00	
Bussey Institution, balance spent,	648.30	
Daniel Austin Fund, income of 1879–80 used by Library in 1880–81,	140.04	
		16,513.17
		81,480.44
Balance, which is the net increase of the Funds for the year ending August 31, 1881, apart from gifts for capital account,		110,621.73
Total,		$192,102.17

The following tables are not found, in their present form, in the Treasurer's books. They are intended to exhibit with some detail the resources and the expenditures of each department of the University. The income of every fund held by the University is given in these tables, and also the sum paid out for the specific object of each and every fund, in case that sum be either less or more than the actual income of the fund. If the object to which the income of a fund is to be applied be a general one, — like salaries, for example,— no separate mention is made in these tables of that appropriation. That particular payment is merged with others of the same kind under the general heading. A balanced summary of these tables will be found on page 50.

TABLE No. I.

THE UNIVERSITY.

RECEIPTS.

Income of the unappropriated fund heretofore called the Stock Account,	$7,756.67	
Income of the following funds: —		
Insurance and Guaranty,	7,591.85	
Israel Munson,	844.20	
Leonard Jarvis,	1,052.76	
Samuel D. Bradford,	281.40	
Peter C. Brooks,	76.92	
Thomas Cotton,	7.88	
Parker Fellowship,	3,052.20	
John Thornton Kirkland Fellowship,	665.07	
Harris Fellowship,	567.41	
James Walker Fellowship,	22.30	
Graduates Scholarship,	1,465.70	
Sumner Prize,	81.31	
Winn Professorship,	2,357.76	
Sever,	580.65	
Retiring Allowance,	726.76	
John C. Gray,	335.00	
		27,465.84
For the degrees of A.M., Ph.D., and S.D.		270.00
For care of the **Sarah Winslow** Fund,		6.84
Balance remaining after dividing the net income among the Funds,		12.17
For use of Sanders Theatre by societies,		278.58
Sale of grass,		40.00
		$28,073.43

PAYMENTS.

Overseers' Expenses.		
Advertising,	$147.70	
Printing President's Annual Report,	558.12	
Printing Treasurer's " "	119.21	
Printing other reports, &c.,	65.17	890.20
Office Expenses.		
President's	148.83	
Treasurer's	243.42	
Bursar's	670.13	
Corporation Rooms (fuel, rent, &c.),	1,705.50	
		2,767.88
Amount carried forward,		$3,658.08

TABLE I., CONTINUED.

PAYMENTS.

Amount brought forward,			$3,658.08
Salaries.			
President,		$5,008.31	
Treasurer,		4,000.00	
Secretary of the Board of Overseers,		100.00	
Bursar,		3,000.00	
Bursar's Assistant,		1,300.00	
Secretary at Cambridge,		600.00	
For keeping Treasurer's books and copying records and other papers,		2,800.00	
Superintendent of Buildings,		1,500.00	18,308.31
For Salary of Lecturer on Ecclesiastical History (from Winn Fund),			2,500.00
Fellowships.			
John Parker,		2,400.00	
Harris,		612.47	
John Thornton Kirkland,		1,125.00	
Graduates Scholarship,		1,000.00	5,137.47
Memorial Hall and Sanders Theatre.			
Repairs, fuel, gas, &c.,		574.85	
Insurance,		420.00	994.85
Sundries.			
Advertising,		653.23	
Diplomas,		22.00	
Labor, &c. on grounds outside of College Yard,		549.14	
Repairs and improvements on the President's house,		261.60	
Subscription to Mercantile Agency,		125.00	
Watering streets,		213.00	
Watchmen,		524.75	
Examinations at New York, Philadelphia, San Francisco, and Chicago,		587.35	
Repairing and care of Watchman's clock,		14.30	
Rent of Safes,		130.00	
Catalogue (extra pages),		93.00	
Legal services,		5.00	
Printing,		269.48	
Reception of Massachusetts Medical Society,		300.00	
Harvard Register,		300.00	
Quinquennial Catalogue,			
Balance for editing,	$250.00		
Less catalogues sold,	236.00	14.00	
Brick and stone walks,		2,072.64	
Cutting inscription on Boylston Hall,		140.00	
Surveying,		38.00	
Furniture,		385.80	
Freight,		11.84	
Rent of Hall in Boston for lectures on Pedagogy,		66.00	6,776.13
			$37,374.84

TABLE NO. II.

THE COLLEGE.

RECEIPTS.

From Term Bills.			
Instruction,		$125,157.50	
Rents available for general expenses,		32,237.13	
Diplomas,		475.00	
			157,869.63
Income of Scholarship Funds.			
Abbot,		$137.70	
Alford,		42.29	
Bartlett,		100.50	
Bassett. From special investment,		275.00	
Bigelow,		640.52	
Bowditch. Interest,	$1,354.47		
From special investment,	3,500.00	4,854.47	
Bright,		1,525.00	
Browne,		146.97	
Class of 1802,		380.88	
" **1814,**		169.11	
" **1815 (Kirkland),**		266.07	
" **1817,**		200.36	
" **1835,**		141.72	
" **1841,**		197.46	
" **1852 (Dana)** (accumulating),		144.40	
Crowninshield (accumulating),		320.96	
Wm. Samuel Eliot,		287.46	
Farrar,		322.99	
Greene,		130.52	
Levina Hoar (Town of Lincoln),		274.86	
Hodges (accumulating),		307.99	
Hollis,		259.00	
Matthews (½ of net rents of Hall),		3,438.82	
Morey,		419.63	
Pennoyer. Interest,	$113.69		
Annuity,	277.50	391.19	
Edward Russell (accumulating),		26.10	
Saltonstall, Mary and Leverett,		210.92	
Saltonstall, Dorothy (accumulating),		30.71	
Savage,		300.00	
Sever,		170.29	
Sewall,		503.25	
Shattuck,		2,289.52	
Slade,		283.49	
Story,		147.72	
Gorham Thomas,		224.53	
Toppan,		345.83	
Townsend,		1,354.90	
Walcott,		208.02	
Whiting (accumulating),		416.74	21,887.89
Received from the Trustees of the **Thayer** Scholarships,			3,600.00
" " " **Thomas Tileston** of New York Endowment,			150.00
Amount carried forward,			$183,507.52

TABLE II., CONTINUED.

RECEIPTS.

Amount brought forward, ...			$183,507.52
Other Beneficiary Funds, income of.			
"Exhibitions," Interest, ...	$623.58		
Returned by beneficiaries,	597.20	$1,220.78	
Senior "Exhibition,"		94.34	
Samuel Ward, ...		50.00	
John Glover (accumulating), ...		51.19	
Rebecca A. Perkins "		109.24	
Quincy Tufts, ...		584.13	
Moses Day, ...		275.56	
Munroe, ...		548.60	2,933.84
Prize Funds, income of.			
Thomas Lee Prizes for Reading, ...		863.28	
Ward Nicholas Boylston Prizes for Elocution,		234.45	
James Bowdoin Prizes for Dissertations, . . .		617.74	
Edward Hopkins Gift for "Deturs,"		284.62	2,000.09
Funds for Instruction.			
Income of the **Alford** Professorship, ...		1,487.35	
Boylston "		1,518.86	
Eliot "		1,158.83	
J. Phillips's addition to Eliot Prof.,		525.00	
Erving Professorship, ...		187.60	
Fisher "		1,929.12	
Hersey "		626.73	
Hollis " (Mathematics), . .		200.84	
McLean "		2,308.18	
Perkins "		1,125.60	
Plummer "		1,341.07	
Pope "		2,814.00	
Rumford "		2,882.53	
Smith "		1,240.30	
Fund for Permanent Tutors, . . .		870.46	
Thos. Lee Fund for the Hersey Prof.		894.74	
Class Subscription, ...		6,700.00	
Henry Flynt, ...		17.58	
Hollis Prof. of Divinity (accumulat'g),		1,658.92	
Paul Dudley Fund for Lectures, "		97.87	
Anonymous gift, to increase salary, ...		500.00	30,085.58
Botanic Garden.			
Income of Fund. Interest, ...	$1,075.27		
From special investment,	1,020.00	2,095.27	
" " the Massachusetts Fund, ...		851.28	
Estimated value of use of house by Prof. Gray,		1,000.00	
Gifts for present use, ...		1,497.58	5,444.13
Herbarium. Income of Fund, ...			942.56
Amount carried forward, ...			$224,913.72

Table II., continued.

RECEIPTS.

Amount brought forward, ...		$224,913.72
Income of Jonathan Phillips's unrestricted Fund,	$1,668.40	
" " John A. Blanchard's " "	56.28	
" " Daniel H. Pierce Fund, ...	755.78	
" " J. W. P. Abbot's " (accumulating),	164.55	
" " Fund for Physical Laboratory, ...	63.46	
		2,728.47
Sundries.		
Pew Rents, Appleton Chapel, ...	195.00	
For the Degree of Bachelor of Arts out of course, and examination fees, ...	706.50	
Sales of grass and old material, ...	122.71	
Sale of old examination papers, ...	22.00	
For Printing by College Press for other departm'ts,	795.02	
For use of rooms by College officers, ...	878.50	
Sale of tickets to Commencement Dinner of 1881,	586.00	
For use of lockers at Gymnasium, ...	1,135.00	
Fee for use of Gymnasium, ...	10.00	
Physical Laboratory, from students, ...	180.00	
		4,630.73
Total receipts, ...		$232,272.92

PAYMENTS.

Paid the incumbents of the following Scholarships.

Abbot, ...	$150.00
Alford, ...	40.00
Basset, ...	183.34
Bigelow, ...	750.00
Bowditch, ...	5,725.00
Bright, ...	1,525.00
Browne, ...	150.00
Class of 1802, ...	250.00
" 1814, ...	200.00
" 1815 (Kirkland), ...	250.00
" 1817, ...	200.00
" 1835, ...	150.00
" 1841, ...	175.00
Wm. Samuel Eliot, ...	300.00
Farrar, ...	350.00
Greene, ...	120.00
Levina Hoar, ...	200.00
Hollis, ...	250.00
Matthews, ...	4,209.33
Morey, ...	500.00
Pennoyer, ...	380.00
Saltonstall, Mary and Leverett, ...	300.00
Savage, ...	300.00
Amount carried forward,	$16,657.67

TABLE II., CONTINUED.

PAYMENTS.

Amount brought forward,		$16,657.67	
Sever,		175.00	
Sewall,		500.00	
Shattuck,		1,905.12	
Slade,		250.00	
Story,		150.00	
Thayer,		3,600.00	
Gorham Thomas,		250.00	
Toppan,		300.00	
Townsend,		1,500.00	
Walcott,		200.00	
Thomas Tileston of New York Endowment,		150.00	25,637.79
Paid other Beneficiaries.			
Exhibitions,		790.09	
Senior Exhibition		90.00	
Samuel Ward Income,		50.00	
Quincy Tufts " (part of),		559.01	
ay Fund " " "		160.00	
Munroe Fund " " "		557.50	2,206.60
Prizes. **Lee** Prizes for Reading,		270.00	
Boylston Prizes for Elocution,		255.00	
Bowdoin Prizes for Dissertations		450.00	
"Deturs" from **Hopkins** Fund		253.81	1,228.81
Salaries for instruction,			140,003.51
Repairs and improvements on College Edifices not valued on Treasurer's books,			15,578.65
Insurance on College Edifices, etc. not valued on Treasurer's books,			518.33
Botanic Garden, for labor, repairs, and materials,			6,044.01
Herbarium, " " "			335.00
Gymnasium, Locker money, paid Director,		1,135.00	
Wages,		1,098.61	
Printing,		63.75	
Gas, water, and sundries,		702.20	
Fuel,		610.94	
Apparatus and fittings,		932.00	4,542.50
General Expenses.			
Appropriations for collections and laboratories.			
Physical Apparatus (Prof. Lovering),	$600.00		
Mineral and Chemical (Prof. Cooke),	800.00		
Rumford (Prof. Gibbs),	97.07		
Botanical (Prof. Farlow),	100.58		
Physiological (Asst. Prof. James),	19.60		
Geological (Prof. Shaler),	179.66		
Amounts carried forward,	$1,796.91		$196,095.20

TABLE II., CONTINUED.

PAYMENTS.

Amounts brought forward,	$1,796.91		$196,095.20
Zoölogical (Instructors Faxon and Mark),	91.90		
Fine Arts (Prof. Norton), ...	15.00		
Physical (Prof. Trowbridge), ...	464.27		
Drawing (Instructor Moore), ...	128.08		
Greek Department (Prof. Goodwin), . . .	24.30		
		$2,520.46	
Appleton Chapel. Singing, blowing organ, etc., .		564.65	
Advertising, ...		802.48	
Books and binding, ...		121.85	
Clerk in Chemical Laboratory, ...		286.91	
Cleaning and care of College buildings not valued on Treasurer's books, ...		476.50	
College yard expenses.			
Labor and material, ...	$4,690.50		
Manure, ...	211.75		
Tools, etc., ...	131.53		
Seed, ...	154.80		
		$5,188.58	
Commencement Dinner 1881, ...		927.60	
Dean's and Registrar's Office, clerk, stationery, postage, copying, etc., ...		1,838.04	
Diplomas, ...		206.85	
Fuel, ...		3,399.19	
Furniture, ...		806.65	
Freight, ...		141.49	
Gas, ...		1,508.81	
Incidentals, ...		62.31	
Janitors, ...		7,244.55	
Legal services, ...		67.85	
Mats, ...		90.00	
Music, Class-Day, ...		125.00	
Pews hired in Cambridge churches, ...		927.00	
Printing office, expenses, ...		4,884.49	
Services of examiners and proctors, ...		3,117.36	
" " undergraduates, ...		532.00	
Watchman, ...		935.00	
Water rates, ...		449.62	
			87,225.24
Total payments, ...			$233,320.44

Table No. III.

THE LIBRARY.

RECEIPTS.

Income of the following Funds for the purchase of books.			
Subscription for Library,		$573.90	
Nathaniel I. Bowditch,		111.70	
Bright, ½ income of the **Bright** Legacy,	$1,358.92		
Interest on balance,	25.08	1,384.00	
Denny,		291.80	
Eliza Farrar,		282.53	
Horace A. Haven,		170.50	
George Hayward,		287.83	
Thomas Hollis,		128.80	
Sidney Homer,		113.47	
Frederick A. Lane,		292.82	
Charles Minot. Interest,	$113.52		
From special investment,	4,200.00	4,313.52	
Stephen Salisbury,		283.38	
Sever,		1,083.52	
Samuel Shapleigh,		221.26	
Charles Sumner,		2,021.20	
Ichabod Tucker. From special investment,		200.00	
Thomas W. Ward,		293.41	
George W. Wales. Gift,	$200.00		
Interest on unexpended balance,	11.95	211.95	
James Walker,		855.24	
Gift from Dante Society,		50.00	
" " Asst. Prof. **Jacquinot,**		12.80	
			13,183.63
James Savage Fund for general expenses (½ of income),		975.60	
Daniel Austin " " " "		412.06	
			1,387.66
William B. Weeden, gift to aid in publ. Lib'y Bulletins,		100.00	
Henry Lee, " " " " " " "		50.00	
			150.00
Fees for use of Library,			175.00
Sales of Bulletins and Calendars,			133.00
Fines,			12.00
			$15,041.29

PAYMENTS.

For Books from	
Subscription Fund,	$315.48
Bowditch "	95.59
Bright "	335.27
Denny "	161.50
Farrar "	257.18
Gray "	3.92
Haven "	7.52
Hayward "	94.35
Amount carried forward,	$1,270.81

TABLE III., CONTINUED.

PAYMENTS.

Amount brought forward,	$1,270.81	
Hollis Fund,	116.79	
Homer "	125.04	
Lane "	74.30	
Minot "	5,386.81	
Salisbury "	262.87	
Sever "	1,058.78	
Shapleigh "	101.78	
Sumner "	1,465.55	
Tucker "	179.65	
Ward "	58.92	
Wales "	310.00	
Walker "	519.37	
Asst. Prof. **Jacquinot's** gift,	12.80	
Subscription of 1880,	26.17	
		10,969.64
Salaries and wages,	16,380.25	
Binding,	1,002.16	
Stationery and postage,	504.81	
Fuel,	712.01	
Repairs and improvements,	817.00	
Freight,	134.79	
Cleaning,	380.50	
Printing,	91.75	
Furniture,	53.32	
Insurance on steam boiler,	15.00	
Incidentals,	23.25	
Water rates,	42.84	
Bulletins,	1,021.47	
Mats,	15.37	
		21,194.52
		$32,164.16

TABLE NO. IV.

DIVINITY SCHOOL.

RECEIPTS.

Income of the following Funds applicable to Salaries.

General Fund,	$988.87
Benjamin Bussey Professorship,	2,014.50
Parkman Professorship,	858.46
John Hancock "	322.03
Samuel Dexter,	1,087.01
Henry Lienow,	492.32
Mary P. Townsend,	281.40
Winthrop Ward,	112.56
Amount carried forward,	$6,157.15

TABLE IV., CONTINUED.

RECEIPTS.

Amount brought forward,	$6,157.15	
Samuel Hoar,	56.28	
Abraham W. Fuller,	56.28	
Caroline Merriam,	56.28	
Joseph Baker,	422.10	
Thomas Tileston of New York Endowment,	1,994.00	
Oliver Ames,	607.45	
New Subscription,	3,955.04	13,304.58
Income of Scholarship Funds.		
Thomas Cary,	287.62	
George Chapman,	114.11	
Joshua Clapp,	154.80	
Jackson Foundation,	673.86	
J. Henry Kendall,	160.21	
Nancy Kendall,	144.08	1,534.68
Income of other Funds.		
Joshua Clapp,	116.74	
William Pomeroy,	56.28	
Hannah C. Andrews,	28.14	
Lewis Gould,	48.83	
Daniel Austin,	38.86	
Abner W. Buttrick,	539.81	
Interest on Beneficiary money returned,	80.72	909.38
Term Bills.		
For Instruction,	1,158.33	
For Rents and Furniture,	1,174.22	
Books sold,	1.50	
		2,334.05
Benjamin Bussey Trust. One-fourth of net income for use of this School,		1,775.76
		$19,858.45

PAYMENTS.

For Salaries for Instruction,	$12,917.00	
Services of students,	200.00	
Labor, repairs, and improvements,	1,083.60	
Cleaning and care of rooms,	394.11	
Books,	263.01	
Printing,	56.75	
Fuel,	113.30	
Gas,	89.54	
Water rates,	30.00	
Diplomas,	2.05	
Collation,	75.00	
Advertising,	2.25	
Expenses collecting and soliciting subscriptions,	50.00	
		15,276.61
Amount carried forward,		$15,276.61

TABLE IV., CONTINUED.

PAYMENTS.

Amount brought forward,		$15,276.61
Paid the incumbents of the following Scholarships.		
Jackson Foundation,	$230.00	
Cary,	350.00	
Chapman,	46.66	
Joshua Clapp,	50.00	766.66
Paid beneficiaries from the following Funds.		
William Pomeroy,	30.00	
John Foster, income for Divinity students every third year,	179.22	
		209.22
		$16,252.49

TABLE NO. V.

LAW SCHOOL.

RECEIPTS.

Income of the following funds.		
Law School Balance,	$395.89	
Nathan Dane,	844.20	
Benjamin Bussey Professorship,	1,285.33	
Isaac Royall,	447.08	
Benjamin Bussey Trust (½ of net income for use of this School),	1,775.76	
John Foster, income for Law students every third year,	170.02	4,918.28
Term Bills.		
For instruction,		22,267.50
For books sold from Library,		12.50
		$27,198.28

PAYMENTS.

For Salaries for Instruction,	$18,750.00	
Librarian and Assistants,	2,650.00	
Janitor and coat-room boy,	688.79	
Books,	1,792.01	
Binding,	317.90	
Diplomas,	14.93	
Fuel,	499.64	
Gas,	330.22	
Printing	234.32	
Scholarships,	600.00	
Labor, repairs, and improvements,	333.92	
Stationery and postage,	97.75	
Freight,	71.10	
Sundries,	5.93	
Water rates,	70.17	
Furniture,	65.83	
		$26,522.51

TABLE No. VI.

MEDICAL SCHOOL.

RECEIPTS.

Income of the following Funds.		
Medical School, balance,	$2,868.78	
Jackson Medical,	1,028.74	
Warren, for Anatomical Museum,	593.67	
Ward Nicholas Boylston, for Medical Prizes,	227.64	
Ward Nicholas Boylston, for Medical Books,	109.83	
George C. Shattuck,	918.11	
Hersey Professorship, two-fifths income of the fund,	456.90	
Medical Library Fund,	126.92	
Medical School Building Fund,	687.85	
Quincy Tufts,	107.20	
Edward M. Barringer,	15.06	7,140.70
From students for instruction,	47,115.80	
" " for graduation fees,	1,680.00	
" " in Chemical Laboratory, breakage and chemicals,	1,047.88	
" " in Practical Anatomy, for material,	479.69	50,323.37
Subscriptions to the Building Fund (1881),	87,520.00	
Cash from Treasurer of Building Fund (1874–75),	86,954.00	174,474.00
		$231,938.07

PAYMENTS.

Boylston Medical Prizes. Prizes,	$452.15		
Advertising,	105.50	557.65	
Warren Anatomical Museum.			
Expenses, and additions to collection,		172.24	
Chemical Laboratory, apparatus, chemicals, and wages,		1,490.46	
Physiological Laboratory, expenses and wages,		950.00	
Practical Anatomy and Surgery Expenses,		2,163.47	
Topographical Anatomy Expenses,		89.00	
Embryology Expenses,		20.00	
Microscopy Expenses,		39.26	
Obstetrics "		319.75	
Histology "		14.06	
Materia Medica "		97.01	
Salaries for instruction,		37,020.24	
Repairs and improvements,		733.41	
Scholarships,		800.00	
For account of new building,		14,610.00	
Sets of bones,		200.00	59,276.55
Amount carried forward,			$59,276.55

Table VI., continued.

PAYMENTS.

Amount brought forward,		$59,276.55
General Expenses.		
Advertising and catalogues,	$1,016.00	
Alcohol,	67.85	
Books from Library Fund,	5.00	
Cleaning,	212.16	
Clerk,	700.00	
Diplomas,	111.00	
Doorkeeper,	56.00	
Faculty meetings,	80.50	
Fuel,	507.99	
Freight,	17.10	
Gas,	534.40	
Janitor,	1,200.00	
Legal Services,	110.00	
Librarian,	20.00	
Mats,	7.35	
Printing,	173.53	
Rent of rooms (in part) for Pathological specimens,	200.00	
Rent and heating of rooms for Chemical Laboratory,	602.50	
Services of Examiners,	15.00	
Stationery, postage, and sundries,	70.85	
Telephone service,	46.92	
Water rates,	70.60	5,824.75
		$65,101.30

Table No. VII.

DENTAL SCHOOL.

RECEIPTS.

From Students,	$2,905.83	
Infirmary,	625.65	
Laboratory,	162.50	
Rent of a part of the School building,	315.00	
Subscription from Dr. S. S. Silva,	5.00	
		$4,013.98

PAYMENTS.

Advertising and catalogues,	$114.30	
Binding,	5.95	
Care of operating room at hospital,	70.00	
Drugs, chemicals, and sundries,	92.11	
Diplomas,	8.96	
Fuel,	119.00	
Gas,	16.90	
Gold foil and metals,	308.95	
Instruments and apparatus,	534.16	
Interest on debt,	967.93	
Printing,	41.50	
Repairs to building,	106.84	
Repairs to Furniture,	160.79	
Salaries of demonstrators,	993.00	
Stationery and postage,	39.10	
Taxes,	118.56	
Water rates,	11.50	$3,709.55

TABLE NO. VIII.

LAWRENCE SCIENTIFIC SCHOOL.

RECEIPTS.

Income of the following Funds.			
Professorship of Engineering,		$2,080.06	
Professorship of Chemistry,		153.35	
Abbott Lawrence,		3,298.33	
James Lawrence. Interest,	$900.05		
From special investment,	3,000.00	3,900.05	
John B. Barringer. Interest,	$1,471.05		
From special investment,	200.00	1,671.05	
Gray Fd. for Zoöl. Museum. Interest,	$670.00		
From special investment,	2,893.75	3,563.75	
Sturgis Hooper. Interest,	$3,796.65		
From special investment,	4,025.00	7,821.65	
Agassiz Memorial. Interest,	$14,548.81		
From special investment,	1,100.00	15,648.81	
Teachers and Pupils,		407.04	
Humboldt,		414.92	
Permanent Fund for Museum of Zoölogy,		6,296.34	45,255.35
Advances by Alexander Agassiz, Esq., to the Building Fund,			33,835.50
Term Bills, for Instruction,			6,870.00
			$85,960.85

PAYMENTS.

Paid on the order of the Faculty of the Museum of Comparative Zoölogy, from the following Funds.		
Gray,	$3,563.75	
Agassiz Memorial,	9,307.56	
Teachers and Pupils,	407.04	
Humboldt,	414.92	
Permanent,	6,296.34	
Agassiz Building Fund,	33,835.50	53,825.11
Salaries for instruction,	18,548.33	
Expenses in Geology,	800.00	
Stationery and Postage,	17.70	
Proctorial services,	36.00	
Books, Engineering Department,	118.70	
Instruments and apparatus,	358.88	
Printing,	14.04	
Fuel,	280.67	
Gas,	11.70	
Janitor,	480.00	
Labor and repairs,	90.57	
Expenses Chemical Laboratory (part of),	371.05	
Scholarships,	600.00	
Interest on advances,	476.79	
Diplomas,	1.29	
Water rates,	25.77	22,231.49
		$76,056.60

Table No. IX.

OBSERVATORY.

RECEIPTS.

Income of the following Funds.		
Observatory, balance,	$439.09	
Edward B. Phillips,	5,911.76	
James Hayward,	1,125.60	
David Sears,	1,139.38	
Josiah Quincy,	618.70	
James Savage (½ of net income),	975.60	
Charlotte Harris,	107.20	
		10,317.33
Subscriptions, paid,		3,680.00
From sale of time signals,	3,091.67	
" " " Annals,	6.00	
Use of chairs, bill repaid by Am. Assoc. Adv. Science,	4.50	
		3,102.17
		$17,099.50

PAYMENTS.

Salaries and wages,	$12,641.51	
Cleaning and care of Observatory,	190.14	
Gas,	88.80	
Instruments and apparatus, including repairs on same,	1,744.10	
Repairs and improvements on buildings and grounds,	1,572.40	
Stationery and postage,	223.52	
Fuel,	102.57	
Books,	250.08	
Binding,	83.39	
Water rates,	20.00	
Printing,	73.31	
Freight,	149.49	
Trustees for Mrs. Winlock, final payment from sale of time signals,	93.75	
Chemicals and sundries,	27.40	
Furniture,	168.87	
Mats,	19.00	
		$17,448.33

Table No. X.

BUSSEY INSTITUTION.

RECEIPTS.

From **Bussey** Trust (½ net income),	$3,551.52	
From **Bussey** Building Fund (net income),	778.51	
Fees for Instruction,	580.00	
Sale of coal to Arboretum,	75.83	
From **Arnold** Arboretum for rent of greenhouses,	50.00	
Sale of bulletins,	9.45	
		$5,045.31

TABLE X., CONTINUED.

PAYMENTS.

For Salaries,	$6,100.00	
Books,	36.51	
Stationery and postage, cleaning, gas, &c.,	38.48	
Fuel for school building,	60.25	
Wages,	168.00	
Horticultural Department, expenses,	546.45	
Zoölogical Department, expenses,	41.09	
Repairs and improvements,	213.81	
Diplomas,	1.02	
		$7,205.61

Bussey Building Fund.

Receipts.

Income of unexpended balance of Fund,	$278.51	
Estimated value of use of house by Prof. Storer,	500.00	
		$778.51

Payments.

Income carried to Bussey Institution,	$778.51

James Arnold Fund.

Receipts.

Income of Fund,	$8,085.24

Payments.

19/20 of income carried to Arnold Arboretum,	$7,680.98

Arnold Arboretum.

Receipts.

Income of unexpended balance of Fund,	$266.55	
From James Arnold Fund,	7,680.98	
		$7,947.53

Payments.

Salary of Director and Assistant,	$2,900.00	
Expenses of Arboretum,	2,083.22	
		$4,983.22

TABLE NO XI.

MISCELLANEOUS FUNDS.

Bussey Trust.

Receipts.

Net income from Real Estate,	$13,903.04

Payments.

Annuities,	$6,800.00	
One-half of the remaining income to Bussey Institution,	3,551.52	
One-quarter " " " Divinity School,	1,775.76	
" " " " " Law School,	1,775.76	
		$13,903.04

Gray Fund for Engravings.

Receipts.

Income from special investment,	$562.50	
Interest on balance of Fund,	335.91	
From sale of catalogues,	37.00	
		$935.41

Payments.

To the Treasurer of the Museum of Fine Arts,	$875.00	
For Engravings from accumulated income,	4,393.00	
		$5,268.00

Annuity Funds.

Receipts.

Gore, income,	$1,174.70	
Mary Osgood, income,	390.26	
Lucy Osgood, income,	696.48	
Anonymous Observatory, income,	720.00	
Bemis, income,	2,680.00	
		$5,661.44

Payments.

Gore, annuities,	$900.00	
Mary Osgood, annuity,	360.00	
Lucy Osgood, annuities,	780.00	
Anonymous Observatory, annuity,	720.00	
Bemis, annuity,	2,832.50	
		$5,592.50

Daniel Williams Fund.

Receipts.

Interest on Fund,		$861.30

Payments.

Treasurer of Herring Pond Indians,	$227.87	
" " Mashpee Indians,	607.23	
		$835.10

Sarah Winslow Fund.

Receipts.

Interest on Fund,		$259.37

Payments.

Minister at Tyngsborough, Mass.,	$133.32	
Teacher at " "	133.32	
Commission on income credited to University,	6.84	
		$273.48

James Savage Fund.

Receipts.

Interest on Fund,		$2,251.20

Payments.

Scholarship,	$300.00	
One-half the remaining income to Library,	975.60	
" " " " Observatory,	975.60	
		$2,251.20

TABLE XI., CONTINUED.

Bright Legacy.

Receipts.

Interest on Fund,		$2,717.84

Payments.

One-half income to **Bright** Book Fund,	$1,358.92	
Scholarships,	1,525.00	
		$2,883.92

Sever Hall Building Fund.

Receipts.

From **Sever** Fund, appropriation for furniture,	$11,000.00	
Net Interest on Fund,	122.48	$11,122.48

Payments.

On account of Architectural services, contracts for building, and furniture,	$2,432.72	
For furniture from **Sever** Fund,	11,000.00	
		$13,432.72

Sundry Accounts.

Receipts.

Gain from change of investment for James Lawrence Fd.,	$375.00	
" " " " " Gray Fund for Engravings,	525.00	
Chinese Subscriptions paid and fee for instruction,	2,037.15	
Advances to Chinese Instruction from "General Investments,"	62.85	
Baring Bros. & Co. advances in account,	1,479.43	
		$4,479.43

Payments.

Loss from change of investment for Leonard Jarvis Fund,	$133.34	
" " " " " " Adams Ayer "	252.50	
Salary of Chinese Instructor,	2,100.00	
Annuity for Class of 1802,	120.00	
Advances to Dental School, repaid,	304.43	
" " Lawrence Scientific School, repaid,	3,041.35	
" " **Agassiz** Memorial Fund, "	6,341.25	
Gore Annuity Fund, spent in improving Gore Hall,	2,414.59	
Stock Account, cost of Morse Estate, Cambridge,	16,873.00	
Sever Fund, transferred, for furnishing Sever Hall,	11,000.00	
Daniel Austin Fund, transferred, income of 1879–80 to Library,	140.04	
		$42,720.50

Gospel Church Fund (accumulating).	Interest on Fund,	$121.88
Robert Troup Paine Fund "	From special investment,	754.08

GENERAL SUMMARY OF THE TABLES.

		Receipts.	Payments
Table I.	University, ...	28,073.43	37,374.84
Table II.	College, ...	232,272.92	233,320.44
Table III.	Library, ...	15,041.29	32,164.16
Table IV.	Divinity School, ...	19,858.45	16,252.49
Table V.	Law School, ...	27,198.28	26,522.51
Table VI.	Medical School, ...	231,938.07	65,101.30
Table VII.	Dental School, ...	4,013.98	3,709.55
Table VIII.	Lawrence Scientific School, . . .	85,960.85	76,056.60
Table IX.	Observatory, ...	17,099.50	17,448.33
Table X.	Bussey Institution, ...	5,045.31	7,205.61
	Bussey Building Fund, ...	778.51	778.51
	James Arnold Fund, ...	8,085.24	7,680.98
	Arnold Arboretum, ...	7,947.53	4,983.22
Table XI.	Bussey Trust, ...	13,903.04	13,903.04
	Gray Fund for Engravings, ...	935.41	5,268.00
	Annuity Funds, ...	5,661.44	5,592.50
	Daniel Williams Fund, ...	861.30	835.10
	Sarah Winslow Fund, ...	259.37	273.48
	James Savage Fund, ...	2,251.20	2,251.20
	Sever Hall Building Fund, ...	11,122.48	13,432.72
	Bright Legacy, ...	2,717.84	2,883.92
	Sundry Accounts, ...	4,479.43	42,720.50
	Gospel Church Fund, ...	121.83	
	Robert Troup Paine Fund, ...	754.03	
		726,380.73	615,759.00
		615,759.00	
	Balance	$110,621.73	

Which is the net increase of the Funds and balances,* excluding gifts for capital account, as also shown on page 27.

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* The net increase of the Medical School Building Fund during the year, due to subscriptions, has been $160,551.85, so that the net decrease in the sum of all the other Funds and balances has been $49,930.12.

Certificate of the Joint Committee of the Corporation and Overseers of Harvard College, for examining the Books and Accounts of the Treasurer entered in the Journal kept by him.

WE, the undersigned, a joint committee of the Corporation and Overseers of Harvard College to examine the books and accounts of the Treasurer for the year ending August 31, 1881, have examined and audited the Cash book from pages 82 to 121, inclusive, and have seen that all the bonds, notes, mortgages, certificates of stock, and other evidences of property, which were received by him and on hand at the beginning of said year, are now in his possession, or are fully accounted for by entries made therein. We have also noticed all payments, both of principal and interest, indorsed on any of said bonds or notes, and have seen that the amounts so indorsed have been duly credited to the College.

We have carefully examined all notes, bonds, mortgages, and other securities invested during the said year, and are of opinion that all such investments have been judiciously made and are amply secured.

We have in like manner satisfied ourselves that all the entries for moneys expended by the Treasurer, or charged in his books to the College, are well vouched; such of them as are not supported by counter entries being proved by regular vouchers and receipts.

The Committee have also seen that all the entries for said year are duly transferred to the Ledger, and that the accounts there are rightly cast, and the balances carried forward correctly to new accounts.

(Signed,)

J. Q. ADAMS,
ALEXANDER AGASSIZ,
} *Committee on the part of the Corporation.*

LEVERETT SALTONSTALL,
CHARLES HENRY PARKER,
ISRAEL M. SPELMAN,
AMOS A. LAWRENCE,
} *Committee on the part of the Board of Overseers.*

Boston, Dec. 19, 1881.

ANNUAL REPORTS

OF THE

PRESIDENT AND TREASURER

OF

HARVARD COLLEGE.

1881-82.

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1882.

PRESIDENT'S REPORT FOR 1881-82.

To the Board of Overseers: —

The President of the University has the honor to submit the following Report for the academic year 1881–82; namely, from September 29, 1881, to September 28, 1882: —

By the sudden death of Thomas Buckminster Curtis, A.B., M.D., on the 12th of December, 1881, the University lost a highly valued instructor and the community a learned, skilful, and humane physician, whose large acquirements and resources were always at the service of others.

Mr. Ko kun-hua, Instructor in Chinese, died of pneumonia on the 14th of February, 1882, after a brief sickness, leaving a wife and six young children in a peculiarly helpless and desolate condition. He had been in the employ of the University since September 1, 1879, under a three years' contract made with him in China by the late Francis P. Knight, on behalf of the President and Fellows; so that his term of service had nearly expired, and he was looking forward to a return within a few months to his native land. He was a refined, scholarly, and conscientious man, punctilious in every observance and diligent in every duty, — a heathen gentleman who could have taught many a Christian how to live worthily and suffer patiently. His family were sent back to Shanghai by the University, and a private subscription was raised in Cambridge and Boston sufficient in amount to secure them against want until the children should be grown up and educated.

RESIGNATIONS.

George Minot Garland, Assistant in Clinical Medicine, October 10, 1881.
Sumner Burritt Stiles, Proctor, October 10, 1881.
Henry Gilman Nichols, Proctor, October 10, 1881.
William Amos Bancroft, Proctor, October 10, 1881.
George Riddle, Instructor in Elocution, October 10, 1881.
Andrew Stillman Waitt, Superintendent of Buildings, January 9, 1882.
John Cheney Thurston, Auditor of the Dining Association, March 27, 1882.
Charles Sedgwick Minot, Instructor in Oral Anatomy and Pathology, April 10, 1882.
Howard Malcolm Ticknor, Instructor in Elocution, May 29, 1882.
John Robinson, Assistant at the Arboretum, May 29, 1882.
Luther Dimmock Shepard, Professor of Operative Dentistry, May 29, 1882.
Henry Jacob Bigelow, Professor of Surgery, May 29, 1882.
Henry Harris Aubrey Beach, Demonstrator of Anatomy, June 26, 1882.
Thomas Waterman, Assistant in Anatomy, June 26, 1882.
Charles Franklin Dunbar, Dean of the College Faculty, June 28, 1882.
Francis Barton Gummere, Instructor in English, September 1, 1882.
Frank William Taussig, Secretary to the President, September 1, 1882.
Henry Nathan Wheeler, Instructor in Mathematics, September 26, 1882.
William Harlow Melville, Proctor, September 26, 1882.
George Francis Arnold, Assistant in the Library, September 26, 1882.
Arthur Percy Cushing, Proctor, September 26, 1882.

Mr. Andrew S. Waitt, Superintendent of Buildings, resigned his charge on account of ill-health, on the completion of his twenty-eighth year of continuous service, a service which was always faithful, zealous, and prudent.

Dr. L. D. Shepard resigned the Professorship of Operative Dentistry because the proper discharge of his duties as professor interfered to an unreasonable degree with his private practice. As Dr. Shepard had given the Dental School fourteen years of almost gratuitous service, eleven as assistant professor and three as professor, and the School had not the means of paying him a suitable salary, the Corporation could not but yield to his wish to retire.

The resignation of Professor Henry J. Bigelow, after a service of thirty-three years as Professor of Surgery, was an event of grave interest for the Medical School and the whole University. A discoverer and inventor of world-wide reputation, a brilliant surgical operator, a clear and forcible lecturer, a keen debater, and a natural leader of men by force of activity, ingenuity, and originality, Dr. Bigelow was from the beginning to the end of his connection with the Medical School a very influential member of the Faculty. His energy and sagacity contributed greatly to the rapid growth of the School between 1858 and 1870. During the discussions of 1870–71 in the Medical Faculty and the governing boards, — discussions which resulted in important changes of the general plan and policy of the School, — his part was that of a strenuous, uncompromising, and indefatigable opponent of the new projects; but the caution and moderation which his opposition induced the majority of the Medical Faculty to practise, doubtless made the measures which they finally recommended to the governing boards all the wiser, and therefore the surer to succeed. Dr. Bigelow continued to labor in the School with unabated interest and vigor for ten years after the adoption of the plans which he had opposed. In recognition of his eminent services to the University and the public, Dr. Bigelow was chosen in May last Emeritus Professor of Surgery, and the degree of Doctor of Laws was conferred upon him at the last Commencement.

On the 28th of June, 1882, Professor Dunbar resigned the laborious office of Dean of the College Faculty, the duties of which he had discharged with great acceptance for six years and a half in addition to his duties as Professor of Political Economy. In his official dealings with the students he was keen-sighted, quiet, patient, kind, and just; in his relations with the instructors he exhibited a prudence and a good judgment which commanded their entire confidence. The Faculty was diligently engaged, during his whole administration, in improving its methods of discipline, instruction, and examination, and developing the elective system of studies, as may clearly be seen in the six admirable reports which he prepared between the years 1876 and 1881. The fundamental principle which guided the labors of the Dean and Faculty is well expressed in the following sentence from the Dean's Report for the year 1879–80: "In the revision of the regulations, as well as in the system of elective study, the Faculty have had constantly in view the purpose of encouraging young men when approaching their majority to act upon their own responsibility, and to learn to make a considerate and profitable use of that full liberty of action which they are so soon to enjoy." The two gentlemen who have successively held the office of Dean since its first establishment in 1870 have set for their successors a high standard of dignity, wisdom, and efficiency.

APPOINTMENTS.

[UNLIMITED, OR FOR TERMS LONGER THAN ONE YEAR.]

OLIVER WENDELL HOLMES, JR., to be Professor of Law, January 23, 1882.

EPHRAIM EMERTON, to be Winn Professor of Ecclesiastical History, January 23, 1882.

FREDERICK IRVING KNIGHT, to be Assistant Professor of Laryngology for five years from September 1, 1882, February 13, 1882.

WILLIAM LAMBERT RICHARDSON, to be Assistant Professor in Obstetrics for five years from September 1, 1882, February 13, 1882.

CHARLES BURNHAM PORTER, to be Assistant Professor in Surgery for five years from September 1, 1882, February 13, 1882.

JOHN COLLINS WARREN, to be Assistant Professor in Surgery for five years from September 1, 1882, February 13, 1882.

CLEMENT LAWRENCE SMITH, to be Dean of the College Faculty, February 27, 1882.

HENRY JACOB BIGELOW, to be Emeritus Professor of Surgery, May 29, 1882.

CHARLES FOLLEN FOLSOM, to be Assistant Professor of Mental Diseases for five years from September 1, 1882, June 12, 1882.

WILLIAM HENRY BAKER, to be Assistant Professor of Gynaecology for five years from September 1, 1882, June 12, 1882.

JOHN WILLIAMS WHITE, to be Assistant Professor of Greek for five years from September 1, 1882, June 12, 1882.

DAVID GORDON LYON, to be Hollis Professor of Divinity, June 26, 1882.

DAVID WILLIAMS CHEEVER, to be Professor of Surgery, June 26, 1882.

William Augustus Rogers, to be Assistant Professor of Astronomy for five years from April 9, 1882, June 26, 1882.

Charles Parker Lyman, to be Professor of Veterinary Science, June 28, 1882.

Edward Stevens Sheldon, to be Instructor in Modern Languages, October 10, 1881.

Sereno Watson, to be Curator of the Herbarium and Instructor in Phytography, November 28, 1881.

Edwin Herbert Hall, to be Instructor in Physics, June 12, 1882.

Benjamin Osgood Peirce, to be Instructor in Mathematics, June 12, 1882.

Charles Edward Faxon, to be Assistant in the Arboretum, from June 1, 1882, May 29, 1882.

Warren Andrew Locke, to be Organist and Choir-master, June 26, 1882.

John Cheney Thurston, to be Auditor of the Harvard Dining Association, October 31, 1881.

Lyman Beecher Fisk, to be Auditor of the Harvard Dining Association from April 1, 1882, March 27, 1882.

[FOR ONE YEAR OR LESS.]

For 1881–82.

Henry Grosvenor Carey, to be Instructor in Vocal Music, October 10, 1881.

Charles Edward Faxon, to be Instructor in Botany, October 10, 1881.

Benjamin Marston Watson, to be Instructor in Horticulture, October 10, 1881.

Edward Burgess, to be Instructor in Entomology, October 10, 1881.

Henry John Dixon Jones, to be Instructor in Elocution, October 10, 1881.

Thomas Sergeant Perry, to be University Lecturer upon English Literature, October 31, 1881.

Grenville Stanley Hall, to be University Lecturer on Pedagogy, December 12, 1881.

Alexander McKenzie, to be Lecturer on Biblical Theology, January 9, 1882.

Francis Amasa Walker, to be University Lecturer on the Resources of the United States, January 9, 1882.

Timothy Otis Loveland, to be Clinical Instructor in the Dental School, October 10, 1881.

Charles Wilson, to be Clinical Instructor in the Dental School, October 10, 1881.

Albert Benton Jewell, to be Clinical Instructor in the Dental School, October 10, 1881.

Edwin Perley Bradbury, to be Clinical Instructor in the Dental School, October 10, 1881.

Eugene Hanes Smith, to be Clinical Instructor in the Dental School, October 10, 1881.

Edward Cornelius Briggs, to be Clinical Instructor in the Dental School, October 10, 1881.

Lester Sackett Ford, to be Demonstrator in Zoölogy, October 10, 1881.

Francis Boott Greenough, to be Clinical Instructor in Syphilis, January 9, 1882.

George Minot Garland, to be Assistant in Clinical Medicine, October 10, 1881.

Edward Hickling Bradford, to be Assistant in Clinical Surgery, October 10, 1881.

Joseph Weatherhead Warren, to be Assistant in Physiology, November 14, 1881.

For 1882–83.

James Laurence Laughlin, to be Instructor in Political Economy, March 13, 1882.

Frank William Taussig, to be Instructor in Political Economy, March 13, 1882.

Louis Dembitz Brandeis, to be Instructor in Evidence, April 10, 1882.

Josiah Royce, to be Instructor in Philosophy, May 29, 1882.

Freeman Snow, to be Instructor in Forensics and History, June 12, 1882.

Francis Barton Gummere, to be Instructor in English, June 12, 1882.

Henry John Dixon Jones, to be Instructor in Elocution, June 12, 1882.

Brooks Adams, to be Lecturer on Constitutional Law, June 21, 1882.

Henry Howland, to be Instructor in Torts, June 26, 1882.

Edward Southworth Hawes, to be Instructor in Greek and Latin, September 26, 1882.

Leonard Parker Kinnicutt, to be Assistant in Chemistry, June 26, 1882.

Charles Frederic Mabery, to be Assistant in Chemistry, June 26, 1882.

Harold Whiting, to be Assistant in Physics, June 26, 1882.

Henry Champion Jones, to be Assistant in Botany, June 26, 1882.

George William Perkins, to be Assistant in Biology, June 26, 1882.

Edward Knight Stevens, to be Assistant in Organic Chemistry, June 26, 1882

John Homans, to be Clinical Instructor in the Diagnosis and Treatment of Ovarian Tumors, June 12, 1882.

Francis Boott Greenough, to be Clinical Instructor in Syphilis, June 12, 1882.

Oliver Fairfield Wadsworth, to be Clinical Instructor in Ophthalmoscopy, June 12, 1882.

Samuel Gilbert Webber, to be Clinical Instructor in Diseases of the Nervous System, June 12, 1882.

Clarence John Blake, to be Clinical Instructor in Otology, June 12, 1882.

JOHN ORNE GREEN, to be Clinical Instructor in Otology, June 12, 1882.

AMOS LAWRENCE MASON, to be Clinical Instructor in Auscultation, June 12, 1882.

JAMES READ CHADWICK, to be Clinical Instructor in Diseases of Women, June 12, 1882.

JAMES JACKSON PUTNAM, to be Clinical Instructor in Diseases of the Nervous System, June 12, 1882.

JOSEPH PEARSON OLIVER, to be Clinical Instructor in Diseases of Children, June 12, 1882.

FREDERICK CHEEVER SHATTUCK, to be Clinical Instructor in Auscultation, June 12, 1882.

THOMAS MORGAN ROTCH, to be Clinical Instructor in Diseases of Children, June 12, 1882.

FRANK WINTHROP DRAPER, to be Lecturer on Forensic Medicine, June 12, 1882.

CHARLES SEDGWICK MINOT, to be Lecturer on Embryology, June 12, 1882.

EDWARD NEWTON WHITTIER, to be Instructor in the Theory and Practice of Physic, June 12, 1882.

WILLIAM PALMER BOLLES, to be Instructor in Materia Medica, June 12, 1882.

FRANCIS AUGUSTINE HARRIS, to be Demonstrator of Medico-Legal Examinations, June 12, 1882.

MAURICE HOWE RICHARDSON, to be Demonstrator of Anatomy, June 12, 1882.

JOSEPH WEATHERHEAD WARREN, to be Instructor in Oral Pathology and Anatomy, June 26, 1882.

ABNER POST, to be Clinical Instructor in Syphilis, June 26, 1882.

TIMOTHY OTIS LOVELAND, to be Clinical Instructor in the Dental School, September 26, 1882.

CHARLES WILSON, to be Clinical Instructor in the Dental School, September 26, 1882.

ALBERT BENTON JEWELL, to be Clinical Instructor in the Dental School, September 26, 1882.

EDWIN PERLEY BRADBURY, to be Clinical Instructor in the Dental School, September 26, 1882.

EUGENE HANES SMITH, to be Clinical Instructor in the Dental School, September 26, 1882.

EDWARD CORNELIUS BRIGGS, to be Clinical Instructor in the Dental School, September 26, 1882.

GEORGE FRANKLIN GRANT, to be Demonstrator in Mechanical Dentistry, September 26, 1882.

VIRGIL CLARENCE POND, to be Demonstrator in Operative Dentistry, September 26, 1882.

HENRY PARKER QUINCY, to be Assistant in Histology, June 12, 1882.

EDWARD HICKLING BRADFORD, to be Assistant in Clinical Surgery, June 12, 1882.

WILLIAM STURGIS BIGELOW, to be Assistant in Surgery, June 12, 1882.

Francis Henry Davenport, to be Assistant in Gynaecology, June 12, 1882.
George Minot Garland, to be Assistant in Clinical Medicine, June 12, 1882.
Joseph Weatherhead Warren, to be Assistant in Physiology, June 12, 1882.
William Carroll Emerson, to be Assistant in Chemistry, June 12, 1882.
William Whitworth Gannett, to be Assistant in Pathological Anatomy, June 12, 1882.
Walter Joseph Otis, to be Assistant in Anatomy, June 12, 1882.
Samuel Jason Mixter, to be Assistant in Anatomy, June 12, 1882.

Charles Elliott St. John, to be Proctor in the Divinity School, June 12, 1882.
Arthur Anderson Brooks, to be Librarian in the Divinity School, June 12, 1882.

John Cheney Thurston, to be Auditor of the Dining Association, October 31, 1881.
Frederick Bradford Knapp, to be Superintendent of Buildings for one year from April 24, 1882, April 24, 1882.

At the beginning of the year 1881–82 twelve graduates of other colleges were admitted to the Senior and Junior classes in Harvard College; and at the beginning of the current year thirteen graduates of other institutions were admitted to the Senior, Junior, and Sophomore classes. These twenty-five persons came from nineteen different institutions scattered over the country from Maine to South Carolina, and from Nova Scotia to Iowa. They were admitted without formal examinations upon the conditions which were thought equitable in each case, after careful inquiry into each applicant's previous course of study, and his standing and reputation at the institution from which he came. A standing committee of the Faculty conducts these inquiries, and upon their report the Faculty decides each case by itself. The Faculty is glad to admit to the College good scholars who have graduated, or studied long, at other institutions; but they regard a general rule of admitting *ad eundem* as out of the question, because of the great diversity among the hundreds of institutions which confer the degree of bachelor of arts, and they believe that the method of admission above described is practicable, equitable, and as liberal as a due regard to the standard of the Harvard degree will permit. This practice of entering Harvard College as a candidate for the bachelor's degree after having graduated at another institution may be said to be a recent one, although not unknown before 1881; but there is good reason for it in the variety and range of the instruction here offered, and in many of the cases which have presented themselves since the beginning of the year 1881–82, the student has acted on the advice of officers of the institution with which he was first connected. The practice may therefore prove a growing one, and Harvard College will certainly welcome all such opportunities of co-operating with other institutions.

The College Faculty adopted, after discussions which extended over parts of two years, an important change of policy and practice in regard to the anticipation of studies of the Freshman year by means of examinations passed at the times of the admission examinations. Heretofore, a candidate for admission who passed some of these optional examinations got but little advancement, and gained but little freedom thereby, unless he passed enough of them to be admitted to the Sophomore class. The preparatory schools had small inducement, therefore, to carry their pupils beyond the bare requisitions for admission; unless they could cover the whole work of the Freshman year, and so present candidates for admission to the Sophomore class. The new regulations, in the first place, facilitate the shortening of the College course to three years in individual cases, by providing explicitly that a candidate who has passed a creditable examination for admission to the Freshman class, and moreover passes examinations upon three fifths of the Freshman work, may of right join the Sophomore class, upon condition of making up the remaining two fifths during his three years in College; and by further providing that a candidate who has anticipated less than three fifths, but still a substantial portion of the Freshman work, may ask of the Faculty leave to fulfil the requirements for the degree in three years, specifying in his application the manner in which he proposes to arrange his studies for that purpose. The Faculty will decide upon such applications according to the circumstances of each case. Secondly, the new regulations give greater freedom in his work to a student who, besides passing a creditable examination for admission, has anticipated Freshman studies; for they provide that the work required of him in College as a candidate for the bachelor's degree shall be reduced by the amount of the studies anticipated, provided that the reduction shall not exceed the amount of one full course of study (three or two hours of attendance per week) in any year.

These new regulations are addressed to ambitious students who are quick to learn, and who have something to gain by doing at school the whole, or a good part, of the work of the Freshman year. The possible gains are various. A year may be saved on the course which leads to the degree of bachelor of arts, to be spent in ampler professional study, or in obtaining the degree of master of arts. Robust young men, whose resources are limited, may save the expense of one year at Cambridge by doing extra work at school and in college. On the other hand, the student who has no need to economize, and is quite free to spend four years in college, by anticipating some of the Freshman studies can get more time for the studies of his choice. It is a gain to have accomplished all the prescribed studies in the whole course for the degree of bachelor of arts before entering the College; for then the freedom of study, which is proper to college life as distinguished from school life, begins with the beginning of residence at the College. The Freshman year is in important respects a mere continuation of school life; for its studies are required, and they are the same studies which have been pursued for several years at school, — namely, Latin, Greek, mathematics, and physics, with the addition of the elements of either French or German, and twenty lectures on chemistry. Moreover, in that year the instructor and the willing student are both more hampered by the presence of the unwilling; and the work is seldom found by ambitious students to be as enjoyable and profitable as the work of the subsequent years.

There is good reason to think that capable and ambitious boys could, by the time they were eighteen years and a half old, easily accomplish at good schools the greater part of the work of the Freshman year, in addition to the subjects embraced in the regular examination for admission to the Freshman class. They could then, under the new regulations, obtain the degree of bachelor of arts at the average age of twenty-one and a half, instead of twenty-two and a half, as at present; so that a year would be saved to be devoted to professional training, or to advanced study in preparation for teaching or other learned calling. Under the new rule in regard to the master's degree, which opens courses given in professional schools to candidates for that degree, a young man who proposes ultimately to go into business as a trader or manufacturer will be able to use with great advantage a year saved on the long course which leads to the bachelor's degree, for the study of political science and the elements of law.

It is hardly necessary to point out that these new regulations tend to exalt the function of the secondary schools. Without having received much encouragement from the College, the schools have already begun to present some of their best pupils in more than the two elective groups required for admission. For three years past, from ten to twelve per cent of the candidates for admission have offered more than the two groups required. (See pp. 57, 58.) A few young men are also fitted each year for the Sophomore class ; but there is no secondary school in the country which systematically provides instruction in all the subjects which are taught in the Freshman year. Here, then, are comparatively new fields to be cultivated by zealous masters of secondary schools and their most ambitious pupils. The examinations on Freshman studies will hereafter be held in June as well as in September, in order that candidates who are ready in June may not be obliged to carry on their studies through the long vacation.

As the result of several debates and conferences within the past two years, considerable changes have been made in the statements of the requisitions for admission to the following colleges: Harvard, Yale, Brown University, Dartmouth, Williams, Trinity, Amherst, Wesleyan University, Tufts, and Boston University. The object in view was to make the requisitions of these different institutions the same, on paper at least, for all common subjects ; and this object has been measurably accomplished, so that the work of a school which is required to prepare boys in the same classes for several of these colleges has been much facilitated. The same quantities of the same authors in Greek, Latin, and English, the same topics in arithmetic, the same amounts of algebra and geometry, and the same descriptions of what is required as to reading Greek and Latin at sight, will be found in the official statements of the requisitions for admission at all the above-mentioned institutions, with some exceptions in the single case of Yale College. At several of the colleges, however, there is an older, and perhaps easier, set of admission requisitions which is maintained as an alternative. Some of these colleges, moreover, require candidates to offer subjects which are not demanded at the others ; and no attempt has been made to bring all the colleges even approximately to the same standard in conducting examinations on the same paper requisitions. In spite, however, of all the diversities which remain, the degree of uniformity which has been secured by the negotiations of the past two years is a gain for the secondary schools, and therefore for the colleges as a whole. In conformity with the agreements made on this subject, some slight changes in the requisitions for admission to Harvard College went into effect in 1882. They are described in full in the Dean's Report, p. 56.

The number of special students in the College continues to increase. The Faculty has by gradual steps finally admitted them to all the privileges of undergraduates, except that of winning a degree and consequently gaining admission to the quinquennial catalogue, and has brought them in all respects under the same discipline to which other members of the College are subjected. They may study anything which is taught in the University; they are ranked with other students upon the published rank-lists; and they may win "honors" if they can. (See the Dean's Report, pp. 73, 74.) No scholarships or other beneficiary aids are at present open to them; and this exclusion from beneficiary aid is a loss not only to them but to the College. Many young Americans who possess native force of mind and character grow to manhood under circumstances of poverty or isolation which cut them off from all chance of getting the regular training in Greek, Latin, and mathematics which would have fitted them to pass the College admission examinations at the average age; but they have had irregular opportunities of getting instruction, which they have improved to the utmost; they have read eagerly, and they have intellectual ambition and a keen desire for education. In the wide range of instruction which the University offers, such students find many courses which they are well able to follow, though at first, perhaps, under disadvantages which their zeal and capacity for work soon enable them to overcome; and they are sure to distinguish themselves as scholars if they can find the means of living at the University, under conditions which permit them to put their strength into study. One such student is worth more than scores of youth who have had from childhood up all possible educational advantages, but who have got from them neither power of application, nor a rational ambition, nor any interest in intellectual things. It was observation of the quality of some special students which induced the Faculty gradually to remove the restrictions originally (1876) placed on the admission of this class of students. To see a special student, who upon coming to Cambridge was entirely unable to pass the examinations for admission to the Freshman class, within three years getting the maximum mark in the most advanced courses in Greek and metaphysics which the University provides, is a convincing argument in favor of making hospitable provision for special students in general. The best special students have generally been poor young men, who would always have been excellent candidates for scholarships, and who immediately got such aid whenever, as has repeatedly happened, they were transferred from the class of special students to one of the regular classes of the College. What wise universities most desire is the opportunity of educating young men of uncommon parts; so that restrictions must necessarily be unwelcome which prevent them from applying their beneficiary endowments to the use and furtherance of such young men whencesoever they appear, — whether candidates for degrees or not, whether of regular or irregular previous training, — provided only that they be competent and eager students.

Late in the year the Faculty appointed a committee to consider and report upon the general subject of out-of-door athletic contests, and particularly upon the regulation of match games of ball. It was the elaborateness of the arrangements for match games of base-ball, and the frequency of those contests in April, May, and June which prompted this action on the part of the Faculty; but the inquiry at once took a wide range, and comprehended all the competitive athletic sports. The committee examined the existing methods of maintaining and conducting these sports, and conferred with a number of graduates and undergraduates who were specially interested in them. Before Commencement they reported that a standing committee of the Faculty ought to be appointed to regulate athletic sports, and that the President be requested to ascertain if Yale, Brown, Dartmouth, Princeton, and Amherst (the institutions whose students are represented in the Collegiate Base-ball League) would unite with Harvard in prohibiting games with professional clubs. The Faculty adopted both of these recommendations. A standing committee of three was appointed to regulate athletic sports; and the Faculty thus assumed for the first time a direct responsibility for the character and extent of those exercises. The correspondence of the President with the other colleges above-mentioned was not concluded until October, when it appeared that all the Faculties except that of Yale College would be glad to unite in prohibiting base-ball games with professional clubs.

Since the beginning of the current year, the standing committee of the Faculty have made regulations which forbid College clubs to play or compete with professional clubs, and provide that, after the current year, no student shall belong to a boat crew unless he can swim, and that no student shall engage in any athletic contest until he has been examined and pronounced fit by the Director of the Gymnasium. The committee have also denied to professional "trainers" access to the grounds and buildings of the University, except by special permission of the committee. The influence of the committee has been successfully used to reduce the number of match games of ball, and to confine them to Saturdays. These various restrictive measures have on the whole commended themselves to the judgment of the whole body of students and graduates; for even the young men most active in athletic sports had perceived that the college competitions were running to excess, and that the ball-games, boat-races, and some of the sports technically called athletic, were in danger of losing that amateur quality which should always characterize the bodily exercises and sports of young men who are in training for intellectual pursuits, and for modes of life in which satisfaction and power of usefulness come, not from great muscular strength or special skill in any sport or exercise, but rather from a well-proportioned bodily development and good general health. When games are made a business, they lose a large part of their charm; and college sports cannot approach the professional standard of excellence without claiming the almost exclusive attention of the players, and becoming too severe, monotonous, and exacting to be thoroughly enjoyable. The most devoted college athletes have repeatedly rebelled against what they thought too strict or too prolonged training. Moreover, a high standard of excellence tends to make the number of persons who actually take part in athletic sports very small, the considerable number of tolerably good players being driven from the field, and reduced to the unprofitable position of mere lookers-on.

Many people take it for granted that the students who are conspicuous in athletic sports are capable of nothing better, and stand as a rule at the bottom of the College rank lists. This is by no means the case. Of the eighty-four different students who were members of the University crew, base-ball nine, or foot-ball eleven from 1873 to 1881, more than a quarter stood above the middle of their respective classes, and the average standing of the whole number was represented by seventy-two in a supposed class of one hundred. It may be said, moreover, for some of the very lowest scholars among the athletes, that the perseverance, resolution, and self-denial necessary to success in athletic sports turn out to be qualities valuable in business and other active occupations of after life, even when they are associated with lack of interest in scholarly pursuits or with dulness or slowness of mind. In making this investigation, it was noticed that the base-ball players had on the average a lower rank than the rest (seventy-six in a supposed class of one hundred), the probable explanation being that the base-ball campaign occurs in April, May, and June, absorbing much time at the period of the annual examinations.

In the recent conferences between the committee of the Faculty and the students and graduates interested in athletic sports, and in the general discussion of the subject throughout the University, very little difference of opinion has been exhibited as to what is desirable in the conduct of these sports. It is agreed on all hands that the increased attention given to physical exercise and athletic sports within the past twenty-five years has been, on the whole, of great advantage to the University; that the average physique of the mass of students has been sensibly improved, the discipline of the College been made easier and more effective, the work of many zealous students been done with greater safety, and the ideal student been transformed from a stooping, weak, and sickly youth into one well-formed, robust, and healthy. It is also agreed that athletic competitions, though necessary to the maintenance of a proper interest in the general subject, may easily run into excess, and on that account need to be kept within discreet limits; and that the whole spirit of College sports and contests should be that of amateurs who are amusing themselves, and not that of professional players who are earning a living, and seeking a reputation for its pecuniary value.

The new arrangement for the conduct of morning prayers, which was described in the last Report, worked well throughout the year 1881-82, and has been continued during the current year. The order of the service is as follows: A psalm is read responsively by the minister and the congregation, and is followed by singing by a choir of students; the minister then reads a passage from the Bible, and offers a prayer; the Lord's prayer is then said by the minister and the congregation together; next a hymn is sung, and the service ends with a benediction, the choir singing the Amen. The organ is played while the students are coming in and going out. The service begins at a quarter before nine, and is limited in duration to about twelve minutes, inasmuch as lectures begin at nine o'clock. Many students enter heartily into the service; the choir is composed partly of paid members and partly of volunteers; and the officiating ministers for the year are the ministers who happen to be officially connected with the University, as members of the Corporation, the Board of Overseers, or some Faculty. In 1881–82 these ministers belonged to four different denominations; during the current year they represent but three; for three of them are Orthodox Congregationalists, two are Baptists, and three are Unitarians. The service is impressive, edifying, and interesting, and he who can attend it for years without sometimes being touched by it and moved to better living, must be a very insensible and earth-bound person. Twice within a few years the College Faculty has represented to the Corporation that attendance at prayers ought in their judgment to be made voluntary; but the Corporation has declined to take action upon the subject. In the autumn of 1881 a motion made in the Board of Overseers, that the statutes ought to be altered so that attendance at prayers might be voluntary, was rejected by a large majority.

During the year under review, the Plummer Professorship being vacant, the Sunday morning services in Appleton Chapel were conducted by ministers of different denominations, who were selected by a committee of the Academic Council. In May last the Corporation directed that the Sunday service be held during the year 1882–83 in the evening instead of the morning, and only from the middle of October till the spring recess, the preachers being selected as before by a committee of the Council. These evening services are open to the public as well as to members of the University. The changes made since September, 1881, in the services at morning prayers and on Sundays having rendered the music a more important element than it was before, the Corporation found it expedient to appoint an organist and choir-master; and they were fortunate in securing for this new position Mr. Warren A. Locke, a graduate of the College, a skilful musician, and an experienced teacher.

It has been one result of the recent changes in the conduct of the College chapel, that the church, which was organized in 1814, upon the completion of the chapel in University Hall, as a distinct religious body within the University,[*] has ceased to exist. The Corporation have felt for several years that there were serious objections to making official provision in Appleton Chapel for a religious body which had affiliations with only one sect, and for the accommodation on Sundays of a portion only, and that a diminishing portion, of the University officers.

Last spring the College Faculty and the Academic Council agreed that the distinction which had been maintained since 1877 between graduate and undergraduate courses of instruction should be abolished, and that the courses in the same general subject, like Greek or physics, should be arranged in one series, so that all the instruction offered by the University in each subject should be visible at a glance. As a matter of fact, while the distinction was maintained, the courses in any one department formed a progressive series; graduates were constantly taking courses classed as undergraduate, and many undergraduates were admitted to courses called graduate. (See the Dean's report, pp. 67, 68.) A member of the Junior or Senior class, or a Harvard bachelor of arts or science, or a graduate of some other college who has come to Cambridge to pursue his studies, may be prepared for the higher courses offered in one department of study, but only for the lower in another. That a course of instruction is pursued by undergraduates is no evidence that it is an inappropriate study for a Harvard bachelor who obtained his first degree upon other courses. In short, the taking of the bachelor's degree, which used to mark the completion of a liberal education, now marks only a favorite halting-place where ways intersect and divide.

To encourage graduates of this college and of other colleges to pursue their studies in the arts and sciences at the University, the Corporation and Overseers determined last summer, at the suggestion of the College Faculty, that a few of the scholarships which have heretofore been used for undergraduates might be assigned to graduate students, the award to be made to the most meritorious among those who need pecuniary aid. A cautious experiment on this subject is to be tried during the current year; but a method of opening these scholarships safely and fairly to graduates of other colleges remains to be devised.

The Academic Council gave much attention during the year 1881–82 to a discussion of the conditions on which the degree of master of arts should be conferred. For several years the standing rules of the Corporation and Overseers had provided that the master's degree might be obtained by one year of liberal study after taking the degree of bachelor of arts, or by one year of study in theology, law, or medicine, after taking the degree of bachelor of divinity, or of law, or doctor of medicine, and that the degree of doctor of philosophy should carry with it that of master of arts. All the professional Faculties felt some objection to these rules, because their language implied that professional studies were not liberal, and they made it to appear that the master's degree was superior to the professional degrees; but the Faculties of law and medicine had special reasons for desiring some modification of them. From the time when the three years' course for the degree was instituted at the Law School, the provision for obtaining the master's degree in law by an additional year of study became inoperative, and the School ceased to derive any benefit from it. The Medical School established in 1879–80 an optional fourth year of instruction, but continued to give the degree at the end of three years' study, the Faculty hoping that the best students would remain in the School four years before taking the degree, although they could get it in three. The Harvard bachelor of arts, who had joined the Medical School, could, however, get the degree of doctor of medicine at the end of his third year, and the master's degree at the end of his fourth; and he naturally preferred to get two degrees for four years of study, rather than one only. The Harvard bachelors of arts being generally among the best students in the School, the Faculty saw that their example would be influential with other students against waiting until the end of the fourth year to take the M.D. In other words, the rules about the master's degree were for the Medical Faculty an actual obstruction in the prosecution of their plan of lengthening the course of study for the degree of doctor of medicine. The professional Faculties also urged that the degree of doctor of philosophy was really a professional degree for teachers and men of letters or science; and that there was no reason for making that degree carry with it, or include, the master's degree, which did not apply equally well to all the degrees commonly called professional.

Acting on the advice of the Council, the Corporation and Overseers rescinded the standing rule which provided for giving the degree for an additional year of professional study after graduation in theology, law, or medicine, and amended the remaining rule, so that it should read:— "The Academic Council will recommend for the degree of master of arts candidates otherwise properly qualified, who, after taking the bachelor's degree, shall pursue for at least one year at the University a course of liberal study approved by the Council, and shall pass with high credit an examination on that course. The Council will designate from time to time those courses of instruction in the Professional and Scientific Schools which will be approved by it for the degree of master of arts." This rule proceeds upon the assumption that some, at least, of the studies pursued in the Professional and Scientific Schools are liberal, as distinguished from technical studies; but when the Council undertook in June last to designate those professional courses of instruction which it would accept as liberal, and therefore as suitable for candidates for the master's degree, it found itself upon difficult ground; and at the opening of the current year a question of construction arose in the Council as to the time at which under the new rule a member of any professional school, already a bachelor of arts, might take the master's degree on professional studies, — whether at the end of any year of his three or four years' course in the School, or only at the end of that course. The analogy of the degree of doctor of philosophy was in favor of the view that the professional degree should carry with it the degree of master of arts, and that the two degrees should be simultaneously conferred; but the analogy was far from perfect. The Schools of Law and Medicine had each something to gain by withholding the A.M. until it could go with the LL.B. or M.D.; but some members of these Faculties doubted the justice of this method. A new debate sprang up which has not yet been brought to an issue; but it is already plain that the Council will recommend the governing boards to modify and add to the rule which they made last summer. To put the master's degree upon a thoroughly satisfactory footing, and to make it significant and useful, is well worth a long discussion; for the degree had sunk very low in this country in consequence of the common practice of conferring it, as a matter of course, upon all bachelors of arts who paid a small fee for it three years after taking the bachelor's degree. The efforts made here since the year 1872 to place the degree upon a respectable footing have been successful in one important respect, but have failed in another. The degree has come to be regarded as good evidence that the recipient has made serious attainments in addition to those for which he received the bachelor's degree; but the number of recipients has been altogether too small. That the degree may command respect and be sought for in the future, it ought to be within the reach of, and be held by, a considerable proportion of all the highly educated men in the community. This desirable result cannot be obtained under rules which prevent the best class of professional students from winning the degree.

The following table exhibits in per cents the occupations, or professional destinations, of twelve hundred and twenty-six recent graduates, the survivors of ten classes (1867–1876), as stated in the class reports issued (with one exception) three years after the year of graduation.

	Law.	Medicine.	Theology.	Scientific.	Teaching.	Business.	Unknown & Miscellaneous.
Per cent.	36	10	5	6	9	21	13

The reports are not supposed to be perfectly accurate, and ten years after graduation the distribution of the survivors among the different occupations will not be precisely the same that it is only three years after graduation; but still the figures clearly prove that more than half of the graduates of the College go into law, medicine, theology, and the various scientific callings. It is to be observed, moreover, that the portion of each class which enters the learned and scientific professions undoubtedly embraces a very large proportion of all the men in the class who possess decided intellectual force.

For several years past there have been fire-works, bonfires, and a great deal of noise in the College yard on the night of Commencement, the most active participants in the disturbances being generally young men who had received their degrees in the morning of the same day. There has been nothing malicious or vicious about these disorders, except that a few of the participants have usually been more or less under the influence of intoxicating drink. Very little injury has thus far been done to property, and the accidents to persons have been, with one exception, but trifling. Nevertheless the disturbance is a nuisance to the neighborhood, a source of appreciable danger to property and persons, and a periodical occasion of injurious comment and criticism, and therefore ought to be prevented. The good sense of the great majority of the class just graduated does not prove effectual to control the unthinking turbulence of a small minority, and since the principal actors are bachelors of arts, the ordinary methods of College discipline as administered by the Faculty are inapplicable. Preferring academic methods to any others, the Corporation and Overseers have agreed that they hold themselves at liberty to revoke the degree of any person who participates in these disorders, provided that his degree has just been conferred. It may be expected that this power will be exercised only in very plain cases, and rather by way of suspension than of permanent revocation.

At the instance of the Divinity Faculty, the Corporation and Overseers adopted in June last new rules on the admission of students to the Divinity School. Hereafter only bachelors of arts, or persons who have received an equivalent education, are to be admitted as candidates for the degree of bachelor of divinity, and no person who is not a bachelor of arts is to be admitted as a special student, unless he pass a satisfactory examination in some of the Greek and Latin classics, and in the Greek of the Gospels. The twofold object of these changes is to make the degree of bachelor of divinity inaccessible except to men of thorough training; and to exclude altogether from the School young men who lack the preliminary education necessary to enable them to profit by its teachings, and keep up with its classes. It must be admitted that this regulation in regard to special students is inconsistent with the general tendency in other departments of the University to open instruction to all comers; but the Divinity School requires some special protection, because it peculiarly needs a reasonable degree of homogeneousness in its small classes, and because it is liable to be seriously discredited by the crude public performances of incompetent young preachers, who can say with truth that they are connected with the School, although it has no real responsibility for their quality. The tuition fee of the School is too low (fifty dollars a year) to afford any protection against the entrance of unsuitable persons; but, on the other hand, the total receipts from fees are so small ($1483.35 in 1881–82) that the School has nothing to fear from such a reduction in the number of students as the new regulations are likely to cause.

The Hollis Professorship of Divinity was last filled by the Rev. Henry Ware, who resigned the chair in 1840, after a service of thirty-five years. In 1842 the Corporation separated the little fund of this professorship from the consolidated fund called "Appropriations for Professors," in which it had been long merged, and gave it a separate place in the published accounts with a value of $3998.90. In 1844 they began to accumulate the fund, and until September 1, 1882, made no use of it. In this period of thirty-eight years it doubled three times, so that it now amounts to $34,441.96. When Edward Wigglesworth was chosen in 1721 first Hollis Professor of Divinity, he became the first and the only professor in Harvard College, and the statutes of the professorship assigned to him a vast range of instruction, including positive and controversial divinity, ecclesiastical history, Jewish antiquities, cases of conscience, and critical exposition of both the Old and the New Testament. But when in 1882, after this ancient chair had been vacant forty-two years, the Corporation again determined to fill it, they found that the field originally assigned to the Hollis Professor had in the meantime been divided among five professors of the University, and that in the general progress of knowledge no scholar could be expected to deal thoroughly with more than a small portion of such a field. They therefore elected to the chair Mr. David Gordon Lyon, Ph.D., a student of the Semitic languages and Assyriology, with the general purpose of reinforcing the instruction in Semitic languages, Old Testament criticism, and Jewish history, and so of strengthening the whole department of divinity or theology. After due investigation and deliberation, the Board of Overseers accepted these views, and consented to this election; and Dr. Lyon entered upon his duties at the beginning of the current year.

Thomas Hollis, of London, the founder of the professorship, was a Baptist, and in agreeing with the New England Congregationalists of 1721 upon the statutes of his professorship, he tried to prevent them from insisting on tests of orthodoxy which would have excluded Baptists from his chair. One hundred and sixty-one years after the establishment of the professorship, a member of the Baptist communion is at last elected to it.

The first election of a Winn Professor of Ecclesiastical History, a professorship endowed in 1877, took place in January, 1882, when Ephraim Emerton, Ph.D., was elected to the chair. Dr Emerton has had a thorough training in the study of history both at home and abroad, and as an instructor in history for some years past in the College proper, he has acquired valuable experience in teaching the subject. He is a layman, and brings to the study and teaching of church history the methods used in investigating and expounding the development of other great institutions and bodies of doctrine.

The Rev. Alexander McKenzie, D.D., gave a course of twelve lectures before the School last spring on theology from an evangelical standpoint, and it is the intention of the Faculty to supplement the regular course of instruction in systematic theology by a similar course of additional lectures every year.

There are now six full professors in the Divinity Faculty against three twelve years ago. Within the same period the degree of bachelor of divinity has been instituted, annual examinations in all the studies of the School have been established, the requisitions for admission have been raised, the administration of the beneficiary funds has been placed, as in other departments of the University, upon the basis of scholarship and promise as well as need, and the general spirit of the instruction given has become to a high degree scientific and impartial. In the mean time the bonds of denominationalism have been growing visibly weaker throughout the Protestant world, and it no longer seems impossible that young men should study theology, as they do metaphysics, political economy, or zoölogy, without having committed themselves in advance to any theory, creed, or set of opinions on controverted points. Until that happy day comes, it is hardly to be hoped that the clerical profession can recover from the depressed condition into which it has fallen. The present dearth of able ministers, which is acknowledged in all Protestant denominations, will probably continue so long as young men of independent spirit and mental virility are repelled from the profession at the very threshold, as they now are. A partial remedy for this evil is likely to be found in the conduct of theological education at universities, or other centres of diversified intellectual activity, instead of in isolated denominational seminaries, and with the same academic freedom for teacher and pupil which is allowed in other great departments of study.

There were four important events in the Law School in the year 1881–82. The construction of an elegant and spacious building for the School was begun; a new professorship was endowed with the sum of $90,000 by an anonymous benefactor; to this professorship Mr. Oliver Wendell Holmes, Jr., was chosen; and finally a book fund was raised by subscription to the amount of $47,000, of which $25,230 had been paid on Sept. 1, 1882. The new building will be ready for occupation at the beginning of the next academic year, and will certainly facilitate very much the work of the School, and add greatly to the comfort of its members. These additions to the endowment of the School increase its stability and independence, and indicate, it is to be hoped, that the legal profession and the community are beginning to perceive the importance of endowing professional as well as college education. The accession of Professor Holmes to the Faculty proved to be but a short-lived advantage; for, after an auspicious service of only three months, he accepted the honorable position of a justice of the Supreme Court of Massachusetts.

The tables given in the report of the Dean (pp. 84, 85) indicate that the School has not yet recovered from the restrictive effects of the admission examination imposed in 1877–78, and of the establishment of the three years' course for the degree in the same year. The first table also indicates that the number of students in the School has been affected from year to year, not by the appointment or withdrawal of this or that professor, but by the progressive changes in the regulations of the School concerning admission, residence, and graduation, and to some extent by the changes of legislation, or of rules of court, in various

States of the Union concerning admission to the bar. The School represents a system or method of teaching law, a system which, instead of relying on the passive receptivity of the student, implants in him the spirit of investigation, teaches him how to investigate thoroughly, and cultivates to the utmost his power of independent thinking. It is a system which demands the whole time and strength of an intelligent student for three years; but in return it promises to send him out into his profession with a mental equipment which will enable him, if he possess the right mental and moral fibre, to distinguish himself at once from the mass of untrained youth who annually enter the profession only to encumber its lower ranks. The teachers who administer this system must be men who possess large and systematic knowledge of law, sound judgment, enthusiasm, and the power of clear exposition; but they need not have been eminent at the bar or on the bench. It has but seldom happened that the same man achieved eminence both in practice and as a teacher. In short, the teaching of law is a difficult and honorable profession in itself, and cannot often be combined with, or late in life taken up in exchange for, the practice of law, another absorbing profession which appeals to different motives, develops different qualities, and holds out different rewards. Thus far the Law School has taken its professors, with one exception, from the ranks of the active profession; but in the increasing difficulty of obtaining and retaining suitable professors of that sort it is a satisfaction to remember that there is another approved method of procuring law professors, — the method which the great law schools of continental Europe have long followed, and which has produced not only great teachers but great jurists. Those schools have selected young men of mark, who have shown a genius for law and a desire for the life of a teacher and student, and, having carefully tested on probationary appointments their capacity for teaching, made them professors at an age so early that the whole vigor of their youth and prime could be thrown into teaching and authorship. The Law School has tried this method once with conspicuous success, and it may be obliged to try the method again — without, however, adopting it as a policy.

On the 26th of September, 1881, a letter was received by the President and Fellows from Marie E. Zakrzewska M.D., and nine other female physicians (see Appendix I.), asking if the President and Fellows would accept the sum of $50,000 for the purpose of providing such medical education for women as would entitle them to the degree of doctor of medicine, the sum with its accumulations to be applied to this purpose within ten years, or returned to the donors. At the meeting of the Corporation on the 31st of October, the following action was taken, in view of the considerable change in the membership of the Board of Overseers since May, 1879, when the subject of the admission of women to the Medical School was last discussed in that Board: "Whereas the President and Fellows have been asked if they would accept a fund, the income of which shall be ultimately used for the medical education of women: Voted, to consult the Board of Overseers anew upon the expediency of the University's undertaking that function." This vote was received by the Overseers at a meeting held November 17, 1881, and was referred to a committee of five members, which at the stated meeting of January 11, 1882, presented a majority and a minority report. The majority report, signed by three members, recommended the Overseers not to advise the acceptance of such a fund; the minority report, signed by two members, recommended the Overseers to advise its acceptance. The Board adopted the minority report, and voted, — "To recommend the acceptance by the President and Fellows of a fund, the income of which shall be ultimately used for the medical education of women." (Ayes

11, noes 6). This vote of the Overseers was received by the Corporation at their meeting on January 23; but no action was taken upon the subject, because of private information that members of the minority in the Board of Overseers desired to have opportunity of bringing the matter again before the Board, and had hopes of reversing in a larger meeting the recommendation made on January 11. At a special meeting of the Overseers on the 2d of February, a member of the minority of January 11 moved "that the Corporation be respectfully requested, before taking any action under the vote of this Board, 'to recommend the acceptance by the President and Fellows of a fund, the income of which shall be ultimately used for the medical education of women,' to consult this Board in relation to such action." This motion was laid upon the table. At a special meeting of the Overseers on the 4th of March (the next meeting but one) the above motion having been taken from the table, the member who originally made it obtained the consent of the Board to modify it so that it should read, "That the President and Fellows be requested not to appropriate any money received for the purpose of giving a medical education to women without taking the advice of this Board," and then procured the postponement of the consideration of this modified motion until an adjourned meeting to be held on the 18th. In the evening of the same day (March 4) the Medical Faculty voted that a committee be appointed "to consider and report at an adjourned meeting of the Faculty in one week upon the subject of the medical education of women and its relation to this Faculty." This Committee unanimously recommended, at the adjourned meeting on March 11, that the Faculty pass the following preamble and vote: —

"Whereas the Medical Faculty of Harvard University has learned that the President and Fellows and the Board of Overseers of that Institution are considering the expediency of receiving money for the medical education of women, and of granting a medical degree to women: Voted, that this Faculty protests against any action on the part of the Corporation which shall tend to provide for the medical education of women under the auspices of the University, without the advice and full concurrence of the Faculty of the Harvard Medical School."

The preamble and vote were adopted by the Faculty (ayes 14, noes 5, absent 2), and forwarded to the Corporation and Board of Overseers. The Corporation received this communication at their stated meeting of March 13, and laid it upon the table. The Overseers received it at their meeting previously appointed for the 18th. On that day the motion which was laid on the table at the meeting of March 4 was taken up, again modified by its mover with the consent of the Board, so that it was made to read, "That in the opinion of this Board it is not advisable for the University now to give any assurance, or hold out any encouragement, that it will undertake the medical education of women by Harvard College in its Medical School," and referred to a committee of three with instructions to confer with the Medical Faculty on the subject of their protest just received. At the same meeting it was also voted, "That the Corporation be requested to take no action on the letter of Dr. Zakrzewska and others, inquiring whether the College will accept the sum of $50,000 for the medical education of women upon certain conditions, before receiving a further communication from this Board."

The last vote was received by the Corporation at their stated meeting of March 27. On the 25th of March a special meeting of the Medical Faculty was held to consider, and act upon, a communication from the chairman of a committee of the Overseers proposing a conference with the Faculty. The meeting consisted of seventeen members, five members, including the President and Dean, being absent. The following preamble and votes were adopted: —

"Whereas the Medical Faculty believe that the President and Fellows, and the Board of Overseers are now cognizant of their desire for an opportunity to be heard before these bodies in matters relating to medical education in the University: therefore

"Voted, that the Medical Faculty hereby withdraws its protest to the President and Fellows, dated March 11, 1882, and communicated to the President and Fellows and to the Board of Overseers. (Unanimously.)

"Voted, that this Faculty hereby respectfully represents to the President and Fellows its conviction that the interests of medical education would be advanced, and the harmonious action of the University better secured than now, if the Faculty were officially assured by the President and Fellows that they deem it inexpedient to legislate in matters relating to medical education in the University without first offering to the Medical Faculty an opportunity of expressing its views. (Unanimously.)

"Voted, that if the President and Fellows have a desire to be informed of the present views of the Medical Faculty upon the question of female medical education in the University, the latter would respectfully state that in their opinion it is not advisable that the President and Fellows should open a course of medical study to women under the auspices of the University." (Ayes 16, noes 1. Two members who voted in the affirmative desired to have it recorded that they did so on the ground that the cordial co-operation of the majority of the Faculty was necessary to success, and could not be secured.)

The meeting also appointed a committee to confer with the committee of the Overseers. The two committees having subsequently had a conference, another special meeting of the Faculty was held on the 8th of April to consider what answer should be given to a request from the committee of the Overseers for the reasons which led the Faculty to think it inadvisable that the University should provide a course of medical study for women. The Faculty adopted a reply (see Appendix II.), the substance of which is contained in the following votes: "Voted, that the fact that the Medical Faculty is strongly adverse to undertaking female medical education would be, in their belief, of itself fatal to the success of an attempt in that direction." "Voted, that female medical education cannot be undertaken in the Medical School without a serious risk of detriment to the interests of the medical education now given to men."

At the stated meeting of the Corporation on April 10, the preamble and votes passed March 25 by the Medical Faculty were received, and in response to the representation contained in the second vote, the Corporation recorded the following resolution: "Voted, that the President and Fellows deem it inexpedient to legislate in matters relating to medical education in the University without first offering to the Medical Faculty an opportunity of expressing its views." A standing committee of two members of the Board was also appointed, with which the Medical Faculty might confer on any matters relating to medical education in the University. At the stated meeting of the Board of Overseers on April 12, a communication from the Medical Faculty, enclosing a copy of the above preamble and votes which the Faculty had adopted on the 25th of March, was received and laid upon the table. The committee appointed to confer with the Medical Faculty, to which was also referred the motion made at the meeting of March 18, on the subject of undertaking the medical education of women, reported that they did not "deem it necessary to make any recommendation either for or against this motion," and simply returned it to the Overseers for their action. The motion having been amended by striking out the word "now," it was adopted as follows: —

"Voted, that in the opinion of this Board it is not advisable for the University to give any assurance, or hold out any encouragement, that it will undertake the medical education of women by Harvard College in its Medical School." (Ayes: the Treasurer of the University, and Messrs. Endicott, Paine, Saltonstall, Salisbury, Amory, Russell, Smith, Hodges, Parker, R. M. Morse, Lyman, and Lawrence, — 13. Noes: the President of the University, and Messrs. Brooks, Storey, Peabody, McKenzie, J. T. Morse, Clarke, Seaver, Sargent, Wyman, Kidder, Hale, — 12. Absent: Messrs. Cabot, Holmes, Fiske, Lowell, Lee, Hoar. In the chair, Mr. Codman.) At an adjourned meeting of the Board on April 27, the further consideration of the communication from the Medical Faculty, which was laid upon the table on April 12, was indefinitely postponed. The vote passed by the Board of Overseers on April 12, having been communicated to the Corporation on the 24th, the Corporation immediately took the following action: "Upon the question of accepting the proposal contained in the communication received by this Board on September 26, 1881, from Marie E. Zakrzewska, M.D., and others, in relation to the medical education of women in Harvard University, Voted, that while the President and Fellows of Harvard College recognize the importance of thorough medical education for women, they do not find themselves able to accept the proposal contained in the communication above referred to."

Throughout this discussion the supporters of the policy of providing at the University for the education of women in medicine were placed at serious disadvantage, because the sum of money mentioned was, in the first place, inadequate, and secondly, not ready in hand, but only to be raised in case the President and Fellows consented to receive it. It is proper to add that one reason, not of a permanent character, had some influence in determining the attitude of the Medical Faculty during both the discussions of this difficult subject which have recently taken place, — the first in 1879, and the last in 1882. The Faculty felt that it had on its hands new undertakings enough, which were of uncertain issue as regards the future income of the School, and were sure to be costly during the years of experiment and transition. Thus, in 1879, the fact that they were engaged in radically changing the plan of study in the School was urged by them as a reason for not entering upon the experiment of admitting female students. Again, in April, 1882, the effort which the Faculty has been making since the beginning of the year 1880–81 to establish a fourth year of study in the School was still in its first difficult stages, and the Faculty was beginning to see that the occupation of the new building, which then gave promise of completion within a few months, was sure to occasion many new expenditures, as well as to give the School many new facilities.

The last table in the Dean's report (p. 93) brings out the fact that ninety-one per cent of the graduates of 1882 had been in the School six terms, or three years; and that only one graduate had been in the School less than two years. On going back ten years, these figures are found to be almost reversed. Of fifty-six graduates in 1872, only three had been three years in the School, and only eight more had been two years in attendance; while eighty per cent had been connected with the School only three terms or less. These figures demonstrate that ten years have wrought a great change for the better in the constitution and discipline of the School, and in the quality of the education to which its diploma testifies.

It is the endeavor of the Faculty to make the optional fourth year of study so interesting and profitable that the better class of students will feel that they cannot afford to forego it; but since no class, which has had adequate notice of the establishment of the fourth year's course, can enter upon that course until September, 1883, it is still impossible to foresee how soon this additional effort to improve medical education will succeed. The Dean has twice pointed out in his annual reports that the Trustees of the Hospitals might greatly promote the prompt success of this much-needed improvement by indicating a preference, in selecting house-officers or assistants, for young men who have given four years to medical study over those whose systematic instruction has terminated in three.

Since September 1, 1878, the Dental School has reduced its debt by $2076.47, maintained its standard for the degree, and gained somewhat in the number of its students. It is still burdened with a debt of $14,488.37, and for four years past it has paid no salaries to its professors. It has never paid its clinical instructors anything, and in its best years it only paid the professors a few hundred dollars. The subscription for the benefit of the School which was started in the summer of 1881, produced $515 up to September 1, 1882, all but one of the subscribers being dentists, and thirteen being subscribers of $20 a year for five years. The School has given every evidence that it deserves to be placed upon a better pecuniary footing. Its standard for graduation is high, its course of study longer and more thorough than that of any other American Dental School, and its facilities excellent for giving its students practice in operating; its graduates are attached to it, have faith in it, and are ready to give both time and money, according to their means, for its maintenance. Moreover a considerable proportion of the graduates of the School during the past thirteen years (the first class graduated in 1869) have already become successful practitioners, and influential members of the profession. Among the Boston dentists of largest income are already included several of the graduates of this young School. Indeed, the School is chiefly recruited from year to year by the zeal of its graduates, and the stimulating example of their success. They have themselves started a subscription for the endowment of the School, and have every right to urge it upon the attention of liberal persons who recognize the fact that skilful dentistry has been of great service to them or to their children, and who perceive that the dental profession is, and must continue to be, an indispensable agency for preventing pain, maintaining the power to enjoy food, preserving beauty and strength, and putting off old age. An endowment of at least $30,000 is needed.

The Scientific School, the Botanic Garden, and the Bussey Institution, including the Arnold Arboretum, call for but brief remarks. The Dean of the Lawrence Scientific School directs attention (p. 95) to the explanation of the diminution in the number of special students in 1881-82, namely the freer opening of the College to special students. This cause is likely to continue to produce this effect. The Director of the Botanic Garden was in Europe during the year, and took occasion to study there the methods employed in gardens belonging to Universities. By the generosity of two members of the Overseers' Committee on the Garden, he was enabled to buy a considerable collection of apparatus and instruments for botanical research. During the year $2000 were added to the Garden Fund; but this fund is still inadequate, and persons who desire to promote the study of botany, pure or applied, or to strengthen the public taste for the various forms of floriculture and arboriculture, have here the best possible opportunity to give money in furtherance of these objects.

The net income of the Bussey Trust Fund was larger by $2267.08 than it was in 1880-81, and a further improvement of moderate amount may be looked for, as soon as certain heavy expenditures for repairs upon the stores have been completed. The number of students at the Bussey Institution remained small, but the regular instruction was maintained, and the buildings were kept in good repair. Professors Slade and Storer received a little over one fifth of their proper salaries. The Director of the Arnold Arboretum has been husbanding his resources for several years past; so that he will have at his disposal for immediate expenditure at least $10,000, besides the ordinary income of the Arnold Fund, whenever the long-pending negotiations with the City of Boston for the use of the Arboretum as part of the City's system of parks are brought to an issue, and the planting of trees, shrubs, and herbaceous plants in a permanent arrangement can properly be begun. The report of the Director (p. 122) shows that the energy, which he has been prevented from putting forth in the Arboretum proper, has only been diverted into other productive fields.

A report from the Director of the Chemical Laboratory is for the first time appended to this Report (p. 106). The Director's statement gives a striking picture of the activity which pervades the University Laboratory, not only as a place where elementary and advanced chemistry are taught to a large number of students, but also as a place of research, where the knowledge of chemistry is constantly extended by the diligent labors of professors, assistants and students. The report of the Director is commended to the attention of any friends of the University who may have imagined that the scientific activity and productiveness of the chemical department had diminished, or was in danger of being elsewhere surpassed. It is proposed to embody in this annual Report a similar statement of the work done each year in the department of physics, as soon as this department shall have been concentrated in the new Laboratory. Indeed it is desirable that the President's Report should contain concise descriptions of the work done each year in all the scientific establishments of the University. The Botanic Garden, Museum of Comparative Zoölogy, Chemical Laboratory, Observatory and Arnold Arboretum being already represented in the Report, no large additions would be needed to make the representation complete.

The Library was crippled during the year 1881–82 by a reduction in its staff. Whenever the expenses of the College threaten to exceed its receipts, the Corporation turns to the Library as the best place in which to reduce expenses, because Library work can be postponed while teaching cannot. The administration and service of the Library cost about $20,000 a year, and since they are not endowed, their annual cost falls practically upon the College tuition-fees and the unrestricted funds. The book funds produce nearly $12,000 a year; and to order judiciously, collate, catalogue and place on shelves $12,000 worth of books, besides cataloguing, acknowledging, and assigning to their proper places all the maps, books, pamphlets, and prints annually given to the Library, requires a large amount of skilled labor. There are thousands of books in the Library which for want of money to spend upon cataloguing, have never been entered in the public catalogue begun in 1860. The use of the Library increases from year to year, and involves an increased expenditure for service. The Bulletin and the Bibliographical Contributions issued from the Library have a permanent value for scholars, and are a credit to the University; but their publication costs labor and money, and could not be maintained were it not for the annual support given to them by a few gentlemen who are interested in such work.

In spite of all these legitimate demands for additional outlays, and in spite of the many advantages of a steady rate of expenditure, such as is needed for the maintenance of a permanent staff, the Corporation were obliged to instruct the Librarian, on the 12th of December, 1881, to reduce the expenses of the Library fifteen hundred dollars a year below the expenses of 1880–81, and to effect this reduction as soon as agreements already entered into would permit. The reduction of expenses actually effected in 1881–82 under this vote was $1057.31, it being impossible to secure the full reduction contemplated until the year now current. The work of the Library is seriously in arrears, and the present staff cannot bring it up. In consequence of delays at the Library in ordering books, and delays at the agencies in procuring them, the income of the book-funds has been accumulating to such an extent that $25,000 are available for the purchase of books during the current year. It is doubtful if even this most pressing work of ordering books to that amount, and then making them ready for circulation, can be well and promptly done. What the Library greatly needs, is funds amounting to at least $400,000, the income of which could be applied to the cost of administration and service. Its book funds are already considerable ; but to keep all the books in a great library in such order that each one can be found on demand, issue large numbers of them incessantly to readers in a well warmed and lighted room, keep them all in repair, and incessantly replace thousands of them each on its shelf, costs annually a great deal more than to buy each year the few thousand books, the acquisition of which may reasonably be desired. The Eben Wright Fund of $100.000., which will probably come into the possession of the Corporation on the 1st of January, 1884, is to be devoted to the cost of administration and service in the Library, and will give a welcome relief; but three more such funds could be well applied in the same direction.

Three points are to be noticed in the present excellent administration of the Observatory: in the first place the Director prefers large pieces of routine work, in which some valuable results are sure to be obtained, to bits of occasional work which may perhaps possess more immediate interest, but which involve expense, and are liable to be interfered with at the critical moments by bad weather; secondly, he has devoted the Observatory, in large part, to astronomical physics, without neglecting, however, such purely astronomical work as had been already undertaken or falls in his way; thirdly, he has exerted himself, and with a good measure of success, to get all the valuable work done by his predecessors reduced and published, and he is strenuously endeavoring to reach the point of publishing current observations with no more delay than is necessary for their reduction and proper discussion. These principles of his administration must commend themselves to all intelligent friends of the Observatory; for they are economical as regards expenditure and watchful of the return for every outlay, judicious as regards the selection of a limited field to be especially cultivated, just as regards past administrations which, for lack of means, were obliged to leave whole series of interesting observations unpublished, and efficient as regards the prompt and thorough utilization of all the instruments and resources of the establishment. The long list of papers published during the year by the officers of the Observatory (see p. 117), is an index of the scientific activity which characterizes the place.

By making wise and fruitful application of the additional income which the subscription of 1878 placed at his disposition for five years, the Director and his associates have shown what good use can be made of at least $5000 a year in addition to the income of the existing funds. Sympathy with a pure scientific ardor, respect for the labors and sacrifices of devoted men, living and dead, who have given themselves without reserve to the pursuit of astronomical science in the Cambridge Observatory, pride in the past achievements of American astronomers, and hopeful anticipation of future progress, all unite to further the efforts of the Overseers' Committee on the Observatory to raise this year a permanent fund of $100,000.

The Museum of Comparative Zoölogy received very important accessions during 1881–82, among which the chief were, — a mass of fossil vertebrates, mainly mammalian, brought by Messrs. Garman and Sternberg from Wyoming, Kansas, and Texas, a large collection of insects made in Washington Territory by Dr. Hagen, an important collection of Solenhofen fossils purchased from Mr. E. Haeberlein, and an immense and very valuable collection of the Silurian fossils of Bohemia brought together by the late J. M. von Schary, and bought from his heirs. Sundry less considerable collections of fossil plants, mounted animals and skeletons, palaeozoic invertebrates, and fossil fishes, were also purchased.

The official publications of the Museum were even more numerous than those of the preceding year, consisting of eleven numbers of the Bulletin (877 pages with 32 plates), and two numbers of the Memoirs (171 pages with 14 plates); and many other publications, based upon materials belonging to the Museum, were made during the year by the Curator, the Assistants, and other specialists, in the transactions of various academies and in several scientific journals.

Good progress was made towards finishing the new corner-block of the Museum; the building was plastered, and a few of the rooms are already occupied. A large amount of work was done in clearing the exhibition rooms of material temporarily stored in them, and in arranging the systematic collections of mollusks, fishes, birds, and radiates, and the Indian, Australian, and African faunal collections.

It will not be supposed that all these things were done in 1881–82, with the year's income of the funds appropriated to the Museum — namely, with about $27,000. The collections alone, made or bought during the year, cost more than $38,000. In 1881–82, the Curator, as in many a year preceding, took upon himself heavy charges for building, furnishing, collecting, arranging, and publishing. The great expenditure of money and labor at the Museum for nine years past has been sagaciously managed upon a far-reaching plan, the fruits of which cannot fully appear for several years to come; but an important stage in the development of the establishment as a school of natural history will be reached next October when the new laboratories of zoölogy and geology will be ready for use.

After due consideration, and consultation with the Medical Faculty and some of the instructors at the Bussey Institution, the Corporation and Overseers established a professorship of veterinary medicine in the University; and in the course of the summer Mr. Charles P. Lyman, a Fellow by examination of the Royal College of Veterinary Surgeons, London, was elected to the chair. Since the opening of the current academic year, a Faculty of veterinary medicine has been organized, a course of instruction covering three years has been arranged, and in September, 1883, pupils will be received. The objects which the University had in view in organizing this new department, were briefly these: To train year by year a few competent and trustworthy practitioners; and to contribute to the progress of a branch of science which deals with many questions of public health and with great pecuniary interests.

The experiment of giving instruction in Chinese at the University was brought to a sad end by the death of Mr. Ko. The original plan provided for a five years' experiment, which would have been more hopeful than one of only three years; but the late Mr. Francis P. Knight, who raised the original subscription in 1877, was obliged to offer higher pay than he expected, in order to secure a competent teacher, so that the subscription was insufficient in amount for more than three years, and the contract with Mr. Ko was made for three years from September 1, 1879. As it was, the experiment cost the College $2,954.51 (beside all that the original subscribers contributed, and beside the subscription which was raised last spring for the widow and children); and it remains to be seen whether any beneficial results will ever flow from it. One student whose attainments in Chinese were remarkable went to China, but has returned out of health. Mr. Ko's two oldest sons are more likely to profit by the experiment than any other persons; for they learned some English, and imbibed some Western ideas.

At the beginning of the year the Dining-Hall Association did not have as large a number of members as usual, and the number steadily diminished, until in February there were less than four hundred members. The price of the board during the first three months had been $5.00 a week, and most of the poorer students had left the Hall because they could get board in the town for $4.00 a week, or even less. The majority of the Directors had believed that it was safer to provide board acceptable to persons who were able and willing to pay $5.00 a week, than to cut down the board, and so attempt to keep in the Hall those who did not wish to pay more than $4.00, at the risk of dissatisfying the greater number; but the event shortly proved that the Association could not spare the large body of students who desired cheap board. Thereupon the Directors instructed the Steward to take any measures necessary to reduce the price of board, and requested the Corporation to guarantee that the price should not rise above a maximum to be specified. This request was probably made because the Corporation had given this guaranty once before for the Association, — namely, in the autumn of 1876, the only other time when the number of members fell below 400. The difficulties of the Directors were increased by a certain distrust of the accuracy of the monthly statement of accounts which prevailed among the members of the Association. A committee of the Corporation examined the accounts, satisfied themselves that they were essentially correct, and reported to the Corporation that the price of board did not exceed $5.00 a week for the first three months, that it was less than $5.00 for the month of January, with a little over four hundred members in the Association, and that it was quite within the power of the Directors to keep the price below $5.00 with three hundred and fifty members in the Hall, and to reduce the price if the numbers increased. The Corporation thereupon voted, — "That in the opinion of the Corporation it is unnecessary for them to guarantee the price of board, and that interference by the Corporation with the business of the Association is in general undesirable." The result was, that the Directors, with the help of a large committee appointed to recruit the Association, succeeded in getting safely through the year. The numbers gradually increased, until in May the average membership was four hundred and fifty-seven; the price of board was $5.00 a week from October to April, and $4.54 a week for April, May, and June. The lesson that the Directors of the Association can extricate themselves from difficulties by the use of their own discretion and powers without any help from the Corporation is a wholesome one. Since it is certain that the College authorities could not carry on the Dining Hall, it is a satisfaction to have some assurance that it can be successfully carried on by the Association as now organized; for the Hall is of great service to the University.

In February last, a co-operative society was organized among the students to carry on business in fuel, books, new and second-hand, stationery, second-hand furniture, and a few other articles which students use. The society also undertook to procure from certain Boston and Cambridge tradesmen discounts from regular prices for all its members. Nearly six hundred students joined the society. In its first ten months it has done a safe and useful business to a moderate amount, and has induced all dealers within the range of its competition to reconsider their prices. Its business is limited by the fact that it is all done for cash; for many students prefer getting credit at high prices to paying cash at low ones. The Corporation gave the society the use of the old gymnasium for one year from March 1, 1882.

The subscription of $75,000 for the endowment of the new Physical Laboratory was made up during the past summer, and $22,000 were paid in by September 1. The condition of the anonymous gift of $115,000, wherewith to build a suitable laboratory, having been thus fulfilled, the Corporation set about the preparation of the plans for the building, Mr. Alexander Agassiz having general charge of the undertaking as a committee of the Corporation. The professors and instructors in the department of physics have all given careful attention to the plans, and it is confidently expected that spacious, well-arranged, and thoroughly equipped laboratories, ample cabinets, and convenient lecture-rooms will be the product of their studies. The building will probably be begun in the coming spring.

The annual appointments called University Lectureships continue to serve the good purpose of procuring from gentlemen, not otherwise connected with the University, occasional courses of valuable lectures which are open to the public, sometimes on payment of a fee, and sometimes gratuitously. In 1881–82 three such courses were given,— the first, by Mr. Thomas Sergeant Perry, on Tuesday afternoons in Sever Hall, a course of thirty lectures on English literature; the second, by G. Stanley Hall, Ph.D., on Saturday mornings in Wesleyan Hall, Boston, a course of six lectures on pedagogical subjects; and the third, by General Francis A. Walker, on Tuesday evenings in Sever Hall, a course of four lectures on American agriculture and manufactures.

Many of the College classes which have graduated within thirty years and a few of the older classes have raised a class fund, the income of which is generally used for class expenses, such as printing and circulating periodical reports and providing entertainments. Some of these funds have been lost, and others seriously impaired by injudicious investment; nearly all of them are held in an irregular way, without any attention to legal forms, and without any specification of the uses to which they are ultimately to be applied. The aggregate of these funds is already considerable; and during recent years each class has provided a fund, and the amount of this provision tends to increase. It would not be difficult to devise a plan for making all these funds much more secure than they now are during the life of each class, and for disposing of them in some appropriate manner as each class dies. For example, the Association of the Alumni might furnish from its officers a small body of trustees to hold class funds, to pay the income of each fund to the order of the class secretary, and to dispose of each fund by fixed rules upon the extinction of the class to which it belonged. This subject is respectfully commended to the attention of the alumni.

The measures adopted last year, and described in the last Report, for preventing the continuance of an annual deficit after the year 1881–82, answered the end in view. The deficit for 1881–82 ($14,738.64), was not so large as was feared, and for the current year there will probably be a small surplus.

Since September 1, 1869, the expenditures for the purchase of land and the erection or reconstruction of buildings for University uses have been constant and heavy.

Including the contracts now in process of execution, and the cost of the proposed physical laboratory, and excluding all repairs and all improvements which do not amount to reconstruction, the sum total of these expenditures is not less than $2,300,000. (For a list of items see Appendix III.). Of this amount about $510,000 yields some income; the rest is wholly unproductive. The buildings erected within this period, including those already projected and provided for, fairly meet the present needs of the University; and in the near future a building to cost $250,000 is to be erected from proceeds of the Hastings bequest. The attention of the friends and supporters of the University should now be turned to the increase of the quick capital, or invested funds, and especially of unrestricted funds and of funds devoted to such comprehensive purposes as salaries, retiring allowances, scholarships for undergraduates, special students, graduates, or professional students, administration and service in the Gymnasium, Chapel, Library, or Dining Hall, and the maintenance of the several scientific laboratories. There is a variety of objects, both large and small, as great as the diversity of intellectual interests which the University represents. Among large objects may be mentioned twenty-eight unnamed professorships of as many different subjects which await endowment; among small, the numerous scholarships needed for the promotion of post-graduate and professional study. It would be a material improvement if the salaries of the President and Treasurer were provided for by endowment; for these two salaries are now a heavy charge upon the unrestricted income of the University, and they are annually fixed by a small board of which both those officers are members. Any small fund given in partial support of a large object will be continuously useful, in proportion to its size and the importance of the object, and will faithfully perpetuate the memory of the giver. Thus in 1727 the Rev. Thomas Cotton, a dissenting minister of London, and Bridget his wife, gave the College £100, directing its income to be appropriated to the "augmentation of the President's salary for the time being." The President still receives a modest addition to his salary from the Thomas Cotton fund. It may be doubted whether a building is, after all, so durable and desirable a memorial as a fund, the income of which is devoted to an object of permanent interest and worth. Buildings get out of fashion and decay, or are remodelled and converted to new uses. The buildings which the College occupied in the 17th century have all disappeared; of the four buildings which belong to the 18th century, three have been put to new uses, and two of these three have been completely transformed as to their interiors several times; but the permanent funds which have come down from those centuries are still doing the very work which the givers meant them to do, and time only adds to the interest with which they are regarded.

The usual information concerning the number of students, and the honors, prizes, and degrees given in 1881–82, together with a list of the examining committees appointed for that year by the Board of Overseers, will be found in the Appendix (IV–VIII). The attention of the Overseers is respectfully invited to the following reports from the Deans of the several Faculties, the Secretary of the Academic Council, the Librarian, the Directors of the Botanic Garden, Observatory, Chemical Laboratory, and Arnold Arboretum, and the Curator of the Museum of Comparative Zoölogy.

CHARLES W. ELIOT, *President.*

CAMBRIDGE, January 4, 1883.

REPORTS

OF THE

DEANS OF THE FACULTIES, THE SECRETARY OF THE ACADEMIC COUNCIL, THE LIBRARIAN, THE DIRECTORS OF THE BOTANIC GARDEN, OBSERVATORY, CHEMICAL LABORATORY, AND ARNOLD ARBORETUM, AND THE CURATOR OF THE MUSEUM OF COMPARATIVE ZOÖLOGY.

REPORTS.

To the President of the University:

Sir, — In accordance with the votes of the governing boards of the University, communicated to me in your letter of March 18, I entered upon the duties of Dean of the College Faculty on Commencement Day, when Professor Dunbar resigned the office which he had administered with such ability and success for nearly seven years. I have the honor to submit the following report on the condition of the College during the Academic year 1881–82.

At the beginning of the year the whole number of undergraduates was eight hundred and twenty-three. The Senior class numbered one hundred and eighty-two. Of these, one was subsequently obliged to withdraw on account of ill health, and one died a short time before Commencement; one was required to leave College for persistent violation of the regulations relating to attendance, one was refused his degree for the same reason, and five failed to obtain their degrees on account of deficiencies of scholarship. On the other hand, one member of the class who had been obliged, for personal reasons, to leave College at the end of his Junior year, was permitted to take the examinations and graduate with his class; and five former members, who had been removed to a lower class on account of deficiencies of scholarship, succeeded so far in making good those deficiencies that three of them were recommended for the degree, and two were restored to their class with the privilege of graduating in some future year on making up the deficiencies still remaining. The net result of these losses and gains was a graduating class of one hundred and seventy-seven.

The number of failures to obtain the degree, due to deficiencies of scholarship, during each of the past seven years, is shown in the following table: —

	1876.	1877.	1878.	1879.	1880.	1881.	1882.
Passed in all their work . . .	135	170	144	189	162	182	177
Failed, but can make up . .	6	17	11	5	6	9	7
Failed, and must repeat the year	3	2	4	. .	. .	. .	. .

The numbers of the three other classes, and the changes of all kinds in their composition from October, 1881, to October, 1882, are as follows: —

	Present, October, 1881.	Loss.	Gain.	Present, October, 1882.
Class of 1883	(Juniors) 207	13	10	(Seniors) 204
Class of 1884	(Sophomores) 217	25	18	(Juniors) 210
Class of 1885	(Freshmen) 217	23	14	(Sophomores) 208

The nature of the losses and gains of the several classes is shown by the following table: —

	Class of 1883.	Class of 1884.	Class of 1885.	Total for three Classes.
LOSSES.				
Left College without completing the year	6	11	6	23
Left College after completing the year	2	7	6	15
Removed to a lower class	. . .	6	4	10
Advanced to a higher class	5	1	7	13
Total loss	13	25	23	
GAINS.				
From higher classes	3	. . .	7	
From lower classes	2	7	. . .	
Newly admitted	5	11	7	
Total gain	10	18	14	

It will be seen that thirty-six students who were members of these three classes last year have not returned to College this year. Of these, one died in the summer vacation in consequence of a wound received at the hands of a United States soldier at Fort Popham, Me.; twelve withdrew voluntarily after completing the work of the year, and sixteen without completing it, for various reasons of a personal nature; four withdrew after having received notice that their deficiencies of scholarship were such that they could not go on with their classes; and three were required to leave before the end of the year in consequence of persistent neglect of their college duties. The last two categories are included in the figures for 1882 in the following table, which shows the number of students who in the last eight years have been removed from their classes for deficiencies of scholarship: —

	1875.	1876.	1877.	1878.	1879	1880.	1881	1882.
Removed to lower classes . .	19	28	17	25	14	22	18	14
Withdrawn during the year .	13	8	16	4	11	4	7	3
Total	32	36	33	29	25	26	25	17
Whole number of students.	716	776	823	813	819	813	829	823

At the examination for admission to the Freshman class in 1882, some slight changes in the requirements, announced two years ago, went into effect. The changes referred to were adopted in accordance with the suggestions of conferences of instructors in several New England colleges, which met for the purpose of bringing about a greater degree of uniformity in the requirements for admission. In Latin the new requirements prescribe Books I.–VI. of the Aeneid (or Books I.–V. with the Eclogues), instead of Books I.–IV. and the Eclogues, and permit the substitution of Sallust's Catiline for one book of Caesar. In the Latin elective subjects five, instead of four, orations of Cicero are specified for examination, and an examination in the translation at sight of average passages from the Aeneid and from Ovid's Metamorphoses is substituted for the examination on Books V.–IX. of the Aeneid. In this group, moreover, there are now three papers of one hour each, as in the Greek elective group, instead of two of an hour and a half each. In English Composition the examination was extended to an hour and a half, the additional half-hour being given to the correction by the candidate of specimens of bad English.

The examinations at the end of June were held in Cambridge, Exeter, N. H., New York, Philadelphia, Cincinnati, Chicago, San Francisco, and St. Louis, — in the last-named city for the first time. The preliminary examination of 1881 had given good reason to look for an unusually large number of candidates for admission this year, and this expectation was not disappointed. The following table shows the number of candidates and the general result of the examinations under the present method for each of the past three years: —

	1880.	1881.	1882.
Candidates offered	236[*]	253	315
" admitted	216	231	286
" " clear . .	82	99	116
" rejected	20	22	29

The various combinations of elective groups offered by candidates each year since the establishment of the present method of examination are shown in the following table. It will be observed that this year thirty-seven candidates offered more than the two groups required. Of those who offered only two groups, about three fourths presented Greek and Latin. The remaining combinations were offered by comparatively small numbers, but a growing preference for Latin and Physical Science is noticeable.

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[*] In 1880 the whole number of candidates was 278, of whom 42 were examined by the old method.

Number of Candidates who offered	1878.	1879.	1880.	1881.	1882.
Latin, Greek, Mathematics, and Physical Science	2	3	2	4	6
Latin, Greek, and Mathematics . . .	4	8	15	14	17
Latin, Greek, and Physical Science . .	2	8	7	5	11
Latin, Mathematics, and Physical Sci. .	2	. .	2	1	3
Greek, Mathematics, and Physical Sci. .	. .	1	. .	1	0
Latin and Greek	104	109	159	177	204
Latin and Mathematics	8	14	17	13	12
Latin and Physical Science	9	23	20	25	41
Greek and Mathematics	1	2	. .	2	5
Greek and Physical Science	1	1	4	. .	3
Mathematics and Physical Science . .	5	15	10	11	13
Total number of candidates . . .	133	179	236	253	315

The actual numbers and the percentage of candidates offering each group in 1881 and 1882 — the only years in which all candidates have been examined under the present method — were as follows: —

	1881.		1882.	
Whole number of candidates	253		315	
Number offering		Per ct.		Per ct.
Latin	239	94	294	93
Greek	203	80	246	78
Mathematics .	46	18	56	18
Physical Science	47	18	77	24

The results of the examinations in the several subjects of the present requirements since they were first used are as follows: —

1878. 133 Candidates. 1879. 179 Candidates. 1880. 236 Candidates. 1881. 253 Candidates. 1882. 315 Candidates.	PRESCRIBED SUBJECTS.										
	Caesar and Virgil.	Latin at Sight and Composition.	Xenophon or Reader.	Greek Sentences.	Ancient History and Geography.	Arithmetic.	Algebra.	Plane Geometry.	Physics.	English Composition.	French or German.
Percentage failing in each study.											
1878	14	7.5	29	18	20	13	31.5	43	14	19	36
1879	8	11	20	23	18	14.5	28.5	37	19	28.5	21
1880	14	6	17	17	15	14	29	36	11	17	13
1881	8	6	12	13	15	14	25	27	7	10	18
1882	7	11	7	16	11	12	27	20	14	15	15

<table>
<tr><th></th><th colspan="12">ELECTIVE SUBJECTS.</th></tr>
<tr><th></th><th colspan="2">Cicero and Virgil.</th><th>Latin at Sight and Composition.</th><th>Herodotus.</th><th>Greek Comp.</th><th>Iliad.</th><th>Trigonometry.</th><th>Solid Geometry.</th><th>Elective Physics.</th><th>Chem. or Botany.</th></tr>
<tr><td>Percentage failing in each study.</td><td colspan="2"></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>1878 . . . . .</td><td colspan="2">7</td><td>15</td><td>17.5</td><td>36</td><td>21</td><td>29</td><td>65</td><td>38</td><td>57</td></tr>
<tr><td>1879 . . . . .</td><td colspan="2">16</td><td>28</td><td>22</td><td>33</td><td>13</td><td>32.5</td><td>60</td><td>48</td><td>24</td></tr>
<tr><td>1880 . . . . .</td><td colspan="2">14</td><td>22</td><td>12</td><td>33</td><td>14</td><td>39</td><td>48</td><td>18</td><td>9</td></tr>
<tr><td>1881 . . . . .</td><td colspan="2">15</td><td>18</td><td>12</td><td>19</td><td>12</td><td>30</td><td>41</td><td>16</td><td>27</td></tr>
<tr><td></td><td>Cicero.</td><td>Virgil and Ovid.</td><td>Comp.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>1882 . . . . .</td><td>13</td><td>11</td><td>29</td><td>10</td><td>19</td><td>9</td><td>45</td><td>27</td><td>17</td><td>13</td></tr>
</table>

Of the two hundred and eighty-six candidates who were admitted to the Freshman class, three passed further examinations and were admitted to higher classes, and two hundred and forty-five entered the Freshman class. Of the remaining thirty-eight, some are known to have gone to other colleges, and some intend to enter Harvard College next year; but a large number have undoubtedly taken the examination merely to obtain our certificate of admission, and without any intention of entering college at all.

The present Freshman class began the work of the year with a membership of two hundred and sixty-four, made up as follows: —

Admitted in 1882	245
Previously admitted	14
Removed from a higher class	5
Total	264

The whole number of candidates who offered themselves for a preliminary examination this year was two hundred and eighty-seven, of whom two hundred and thirty-three obtained certificates, having passed in at least five subjects. The following table exhibits the general results of the preliminary examinations on the present requirements for four years: —

Number of candidates who passed in	1879.	1880.	1881.	1882.
Five subjects	38	30	88	40
Six "	29	24	30	28
Seven "	23	31	46	46
Eight "	29	33	65	58
Nine "	13	22	17	33
Ten "	10	10	19	24
Eleven "	3	..	5	4
Received certificates	145	150	220	233
Failed to pass in five subjects	70	64	46	54
Total number of candidates . .	215	214	266	287

The next table shows, for the same period, the proportion of candidates examined in each subject under the present method, and the proportion of failures in each: —

Preliminary Examinat'n. 1879, 215 Candidates. 1880, 214 " 1881, 266 " 1882, 287 "	Caesar and Virgil.	Latin at Sight.	Xenophon or Greek Reader.	Greek Sentences.	Ancient History and Geography.	Arithmetic.	Algebra.	Geometry.	Physics.	English.	French.	German.
Percentage of the whole number of candidates who were examined in each study.												
1879	89	86	74	80	77	96	93	55	55	69	56	7
1880	92	88	78	76	84	97	87	46	61	53	64	5
1881	88	86	78	79	76	97	82	46	74	61	54	5
1882	93	93	77	83	83	97	88	41	75	64	51	5
Percentage of failure among those examined in each study.												
1879	24	25	33	44	23	26	52	78	15	53	13	14
1880	25	25	25	26	39	22	50	61	7	34	21	30
1881	15	19	28	24	22	21	85	41	17	19	17	14
1882	20	26	9	30	27	17	37	27	12	37	17	14

It is gratifying to report that the order of the College during the past year was very satisfactory. The Faculty was not called upon to impose any penalty for disorder beyond an admonition in a single case.

The courses of instruction for 1881–82, with the names of the several instructors, the numbers of students* of various classes and departments in regular attendance on each, the number of sections into which the students were divided, and the number of hours of attendance per week for instructors and for students, are exhibited in the tables given on pages 62–67. The whole of the work done by undergraduates, however, is not shown by this statement, as a considerable number of them took one or more graduate courses, having carried their studies in special departments sufficiently far to enable them to do so.

Instruction in Elocution was given by Messrs. Ticknor, Sargent, and Jones to fifty-nine Seniors, sixty-six Juniors, forty-eight Sophomores, and seventy-three Freshmen. The Freshmen were taught in four sections, each one hour a week. During the first half-year, the Sophomores were similarly taught in three sections; in the second half-year by individual appointments of ten minutes each, once a week. The Juniors and Seniors received instruction by individual appointments of fifteen minutes each week.

Among the valuable opportunities for instruction enjoyed by the students of the College it is proper to mention the public lectures given each year under the auspices of the University by men of distinction in their special departments, and the evening readings by College instructors in ancient and modern classics. In 1881–82 one hundred and twelve public lectures were given on subjects in Theology, Classical Philology, Archaeology, Pedagogy, English Literature, Political Economy, and Natural History; and forty-seven evenings were occupied with readings from Hebrew poetry, Homer, Aeschylus, Sophocles, Aristophanes, Theocritus, Terence, Catullus, Sallust, Horace, Livy, Tacitus, Chaucer, and Shakspere.

In arranging the elective studies for the present academic year,

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* To designate the various kinds of students in the several courses, the following abbreviations are used: Se. for Senior, Ju. for Junior, So. for Sophomore, Fr. for Freshman, Sp. for Special Student, Gr. for Graduate Student, Law for Law Student, Di. for Divinity Student, and Sc. for Scientific Student.

PRESCRIBED STUDIES.

Instructors.	Subjects.	Text-Books.	No. of Students.	No. of Sections.	Hours per week for Students.	Hours per week for Instructors.
		FRESHMEN.				
Profs. Goodwin, J. W. White, and Dyer, and Messrs. Croswell, Preble, and Phillips	Greek	[*Maximum Sections.*] — Lysias (five orations). — Plato (Apology). — Homer (Odyssey, eight books).—Sidgwick's Greek Prose Composition, Part I.— Translation at sight. — Goodwin's Greek Moods and Tenses. — Selections from Grote's History of Greece	108, 1 So.	2 or 3	3	7
		[*Advanced Sections.*] — In addition to the above, Aristophanes (The Clouds) and fifteen lectures on Greek Etymology in connection with Iliad XVIII.	72, 1 Sp.	1 or 2	3	5
		[*Minimum Section.*] — Herodotus and Thucydides (Selections in Goodwin's Greek Reader). — Homer (Iliad, Books IV.-IX.). — Translation at sight. — Composition. — Goodwin's Greek Moods and Tenses. — Selections from Grote's History of Greece	85, 1 Ju., 4 Sp.	1	3	3
Profs. Lane and Allen, and Messrs. Croswell, Preble, and Phillips	Latin	[*Maximum Sections.*]— Livy (Books XXI.-XXII.). — Horace (Odes and Epodes). — Cicero (De Natura Deorum, Book I.). — Translation at sight. — Latin Prose Composition. — Selections from Mommsen's History of Rome	106, 5 Sp.	3 or 6	3	12
		[*Advanced Sections.*] — In addition to the above, Plautus (Trinummus) and Cicero (De Amicitia)	91	1 or 2	3	5
		[*Minimum Section.*] — The same authors as the maximum sections, but in smaller quantities. — Translation at sight. — Latin Prose Composition	8, 8 Sp.	1	3	3
Prof. Dyer	Greek and Latin	Twenty lectures on Greek and Roman Literature	208, 5 Sp.	1	1 till March.	1 till March.
Prof. Cook, and Messrs. Sheldon and Lutz	German	Sheldon's Grammar. — The Joynes-Otto German Reader. — Hauff's Märchen. — Deutscher Novellenschatz (Vol. XIV.). — Writing German	99, 1 Ju., 5 Sp.	2 or 4	3	10
		[*Advanced Sections.*]. — A more extended course in the same books	76, 1 Sp.	1 or 2	3	5
Prof. Jacquinot	French	Brachet (Petite Grammaire Française). — Böcher's Reader. — A. Achard (Le Clos Pommier). — Feuillet (Roman d'un jeune homme pauvre)	27, 1 Ju., 1 So., 5 Sp., 8 Se.	1	3	3
Profs. C. J. White and Byerly, and Dr. B. O. Peirce	Mathematics	[*Maximum Section.*] Algebra (Todhunter, Chapters I. — XXXVI., XLVI., LIII.). — Analytic Geometry (Lectures)	35, 1 Se., 8 Ju., 8 So., 2 Sp.	1	7 in two weeks.	7 in two weeks.
		[*Minimum Sections.*] — Algebra (as above). — Chauvenet's Solid Geometry. — Wheeler's Plane Trigonometry. — Analytic Geometry (Lectures)	180, 4 Sp., 1 So.	8	7 in two weeks.	28
Dr. Hall	Physics	[*Maximum Sections.*] — Ganot's Physics (Mechanics, Hydrostatics, Pneumatics, Heat, and part of Light). — Lectures	88, 8 Sp.	1	2	2
		[*Minimum Sections.*] — The same, omitting the more technical portions.	176, 1 Ju., 5 Sp.	1	2	2
Prof. Jackson	Chemistry	Elementary Chemistry (twenty lectures)	209, 8 Sp.	1	1 after Christmas.	1 after Christmas.
		SOPHOMORES.				
Mr. Drennan and Dr. Gummere	Rhetoric	Hill's Principles of Rhetoric. — Exercises in Writing and Criticism	202, 7 Fr., 7 Sp., 3 Se., 1 Law	4	2	8
Mr. Drennan and Dr. Gummere	Themes	Six Themes, corrected and rewritten	211, 2 Se., 4 Ju., 3 Sp., 2 So.			

		JUNIORS.				
Mr Dronnan and Dr. Gummere	Themes	Six Themes, corrected and rewritten	192, 9 So., 1 Sp.			
Dr. Snow	Forensics	Four Forensics Theses substituted for Forensics, as allowed by the rules, by	187, 5 So., 1 Sp. 14			
		SENIORS.				
Dr. Snow	Forensics	Four Forensics Written work substituted for one or more Forensics, as allowed by the rules, by	144, 5 Ju. 39			

ELECTIVE STUDIES.

Instructors.	Courses.	Subjects and Text-Books.	No. of Students.	No. of Sections.	Hours per week for Students.	Hours per week for Instructors.
Prof. Toy	Hebrew	Davidson's Grammar. — The Hebrew Bible	2 Se., 11 Di.	1	8	8
Prof. Lanman	Sanskrit	Whitney's Grammar. — Lanman's Reader	1 Se., 1 Ju., 1 Sp.	1	8	8
Prof. Greenough	Classics 1	Greek and Latin Comparative Philology. — Curtius's Etymology. — Papillon's Greek and Latin Inflexions	Omitted in 1881-82.		8	
Prof. Greenough	Classics 2	Practice in speaking and writing Latin, in connection with the elementary critical study of a Latin author. — Cicero (Brutus). — Ritter and Preller's Historia Philosophiæ	1 Se., 1 Ju., 8 Gr.	1	2	2
Prof. Dyer	Greek 1	Plato (Protagoras). — Sophocles (Ajax). — Euripides (Bacchae). — Aeschylus (Prometheus)	1 Ju., 18 So., 1 Sp.	1	2	2
Prof. J. W. White	Greek 2	Thucydides (Books VI., VII.). — Aristophanes (Birds). — Euripides (Cyclops)	5 Ju., 32 So., 2 Fr., 2 Gr.	1	2	2
Prof. J. W. White	Greek 3	Practice in reading at sight. — Herodotus (Books III.-VI.)	1 Se., 4 Ju., 52 So., 1 Fr., 1 Sp., 2 Gr.	1	2	2
Prof. Dyer and Dr. Phillips	Greek 4	Composition (First Course).— Sidgwick's Greek Prose Composition	2 Se., 3 Ju., 25 So., 1 Di.	2	1	2
Prof. Dyer	Greek 5	Composition (Second Course). — Sidgwick's Greek Prose Composition. — Sargent and Dallin's Materials and Models	7 Ju., 8 Gr.	1	1	1
Prof. J. W. White	Greek 6	Composition (Third Course). — Sidgwick's Greek Prose Composition. — Selected Exercises	7 Se., 1 Ju., 2 Gr.	1	1	1
Prof'rs. Goodwin and J. W. White	Greek 7	Thucydides (Books I., II.). — Aeschines (in Ctesiphontem). — Demosthenes (de Corona)	7 Se., 9 Ju., 2 So., 1 Fr., 1 Gr.	1	8	8
Prof. Goodwin	Greek 8	Plato (Republic). — Aristotle (Ethics I.-IV., X.)	11 Se., 4 Ju., 3 Gr.	1	8	8
Prof. Goodwin	Greek 9	Aeschylus (Seven against Thebes and Eumenides). — Sophocles (Oedipus at Colonus). — Aristophanes (Knights). — Pindar (Selections)	12 Se., 8 Ju., 2 Gr.	1	8	8

ELECTIVE STUDIES. — CONTINUED.

Prof. Sophocles	Greek 10	Arrian (Anabasis)	5 Se., 6 Ju., 2 So., 4 Fr., 1 Sp.	1	2	2
Prof. J. W. White	Greek 11	The Private Life of the Greeks (Lectures)	17 Se., 17 Ju., 7 So., 1 Sp., 8 Gr.	1	1	1
Prof. Smith	Latin 1	Terence (Phormio, Andria, and Hautontimorumenos, Acts I., II.). — Cicero (Selected Letters). — Tacitus (Agricola). — Horace (Satires and Epistles). — Translation at sight	1 Se., 2 Ju., 52 So., 8 Fr., 1 Sp.	1	8	8
Prof. Greenough	Latin 2	Terence. — Cicero (Pro Murena). — Horace (Satires and Epistles)	1 Ju., 29 So., 1 Fr	1	2	2
Messrs. Croswell and Preble	Latin 3	Composition (First Course). — Nixon's Parallel Extracts. — Selected Exercises	8 Ju., 29 So., 1 Fr.	2	1	2
Prof. Smith	Latin 4	Latin Poetical Literature. — Lectures on the Latin Poets, with illustrative readings from Thackeray's Anthology	2 Se., 5 Ju., 4 So.	1	2	2
Prof. Greenough	Latin 5	Latin Prose Literature. — Cicero (against Verres). — Tacitus (Histories)	4 Se., 4 Ju., 2 So.	1	8	8
Prof. Lane	Latin 6	Suetonius (Lives of Claudius, Nero, Galba, Otho, Vitellius, Vespasian). — Tacitus (Selections from Books XI.-XV. of the Annals). — Juvenal (Selected Satires). — Translation at sight	6 Se., 25 Ju., 2 So., 1 Fr., 1 Gr.	1	8	8
	Latin 7	Composition (Second Course)	Omitted in 1881-82		1	
Prof. Lane	Latin 8	Plautus (Amphitruo, Trinummus, Miles Gloriosus, Rudens). — Lucretius. — Juvenal	18 Se., 4 Ju., 1 Gr.	1	8	8
Prof. Smith	Latin 9	Composition (Third Course). — Lectures on the Chria, with Exercises. — Potts's Passages for Translation into Latin	4 Se., 1 Ju., 8 Gr.	2	1	2
Prof. Child	English 1	Chaucer (Canterbury Tales). — Bacon (Essays). — Milton (Selected Poems)	8 Se., 2 Ju., 18 So., 8 Sp.	1	8	8
Prof. Child	English 2	Shakspere (seven plays)	18 Se., 17 Ju., 18 So., 1 Fr., 5 Sp., 1 Gr.	1	8	8
Prof. Child	English 3	Anglo-Saxon. — Sweet's Anglo-Saxon Reader	3 Se., 1 Ju., 2 So.	1	2	2
Prof. Child	English 4	Early English. — Mätzner's Altenglische Sprachproben	Omitted in 1881-82.		2	
Prof. A. S. Hill	English 5	Rhetoric and Themes (Advanced Course)	9 Se., 10 Ju.	1	8	8
Prof. A. S. Hill	English 6	Oral discussion	89 Se.	1	8 in two weeks	8 in two weeks.
Prof. A. S. Hill	English 7	English Literature of the Nineteenth Century	5 Se., 6 Ju., 11 So., 8 Sp., 1 Law.	1	1	1
Prof. Cook	German 1	Mügge (Am Malanger Fjord). — Wichert (Ein Schritt vom Wege). — Freytag (Aus dem Jahrhundert der Reformation)	4 Se., 9 Ju., 66 So., 4 Fr., 2 Sp.	1	8	8
Prof. Bartlett	German 2	Der Neue Plutarch (Vols. II. and III.). — Selections from the poets of the Nineteenth Century	1 Se., 4 Ju., 52 So., 1 Fr., 8 Sp., 1 Di.	1	8	8
Mr. Hodges	German 3	Hodges's Course in Scientific German. — Helmholtz, Virchow, &c. (Populäre Wissenschaftliche Vorträge)	4 Se., 4 Ju., 9 So., 1 Gr., 1 Di., 8 Sc.	1	2	2
Mr. Lutz	German 4	Composition and Grammar. — Sheldon's Grammar. — Otto's Materials for translating from English into German. — Zschokke (Der Todte Gast)	1 Se., 9 Ju., 11 So., 1 Fr., 2 Sp.	1	1	1
Prof. Bartlett	German 5	Biographies of Goethe and Schiller. — Echtermeyer's Collection of German Lyrics and Ballads	8 Se., 24 Ju., 4 So., 1 Sp.	1	8	8
Prof. Cook	German 6	Lessing (Emilia Galotti and Minna von Barnhelm). — Goethe (Egmont). — Wieland (Oberon)	10 Se., 49 Ju., 6 So., 2 Fr.	1	8	8
Prof. Bartlett	German 7	Schiller. — Lessing (Minna von Barnhelm). — Viehoff (Schiller's Leben). — Literary Histories of Kurz, Koberstein, and Hettner	19 Se., 7 Ju., 1 So.	1	8	8
Prof. Jacquinot	French 1	Brachet's Petite Grammaire Française (2e Partie). — Stahl (Histoire d'un lièvre). — G. Sand (Nanon). — J. Sandeau (Mlle. de la Seiglière)	1 Se., 54 So., 1 Fr., 2 Sp., 1 Sc.	2	8	6

Prof. Bôcher	French 2	La Fontaine (Fables). — Taine (La Fontaine et ses Fables). — Racine (Oeuvres Choisies)	2 Se , 4 Ju., 18 So., 1 Fr.	1	8	8
Prof. Bôcher	French 8	Molière (Oeuvres). — Corneille (Le Cid). — Montaigne (Selections). — Paul Albert (Littérature Française jusqu'au XVIIme siècle)	5 Se., 6 Ju., 6 So., 2 Fr., 8 Law, 1 So.	1	8	8
Prof. Jacquinot	French 4	Paul Albert (Littérature Française au XVIIIme Siècle). — Le Sage (Turcaret). — Montesquieu. — Voltaire. — D'Alembert. — Diderot. — J. J. Rousseau. — Buffon. — Gresset. — Piron (La Metromanie). — Marivaux. — Beaumarchais.	5 Se., 8 Ju., 4 So., 2 Fr., 2 Sp.	1	8	8
Mr. Bendelari	French 5	V. Hugo (Notre Dame de Paris). — Balzac (La Recherche l'absolu). — Cherbuliez (Le Comte Kostia). — T. Gautier (Le Capitaine Fracasse). — Scribe et Legouvé (La Bataille de Dames). — Labiche et Delacour (La Cagnotte)	28 Se., 26 Ju., 8 So., 2 Fr., 2 Sp.	1	3	8
Mr. Bendelari	Italian 1	Toscani's Italian Grammar. — Silvio Pellico (Le Mie Prigioni). — De Amicis (Racconti Militari). — Manzoni (I Promessi Sposi)	10 Se., 17 Ju., 18 So., 1 Sp., 4 Gr.	1	8	8
Mr. Bendelari	Italian 2	Ariosto (L'Orlando Furioso). — Tasso (La Gerusalemme Liberata). — Silvio Pellico (Francesca da Rimini). — Gherardi del Testa (three plays). — Nota (La Fiera). — Carrera (La Quaderna di Nanni)	6 Se., 6 Ju.	1	8	8
Mr. Bendelari	Italian 8	Boccaccio (Il Decamerone). — Petrarca (Le Rime). — Dante (La Divina Commedia; La Vita Nuova)	5 Se., 1 Ju., 1 Sp.	1	8	8
Mr. Bendelari	Spanish 1	Josse's Spanish Grammar. — El Eco de Madrid. — Gil Blas	17 Se., 10 Ju., 14 So., 1 Fr., 1 Gr.	1	8	8
Mr. Sheldon	Spanish 2	Comedias de Moratin. — Hartzenbusch (Obras Escogidas). — Cervantes (Don Quijote)	6 Ju., 1 So., 1 Sp.	1	8	8
	Spanish 8	Calderon. — Lope de Vega. — Early Spanish. — Outline of the History of Spanish Literature	Omitted in 1881–82.		8	
Prof. Palmer	Philosophy 1	Logic and Metaphysics. — Jevon's Logic. — Ferrier's Lectures on Greek Philosophy	8 Se. 20 Ju., 80 So., 1 Fr. 1 Sp., 1 Sc.	1	2	2
Prof. James	Philosophy 2	Psychology. — Taine (On Intelligence)	4 Se., 8 Ju., 10 So., 5 Sp.	1	2	2
Prof. Palmer	Philosophy 8	Ethics. — Mill's Utilitarianism. — Kant's Theory of Ethics. — Lectures and Theses	15 Se., 16 Ju., 1 Di.	1	8	8
Prof. James	Philosophy 4	Contemporary Philosophy. — Mill's Logic. — Theses	9 Se., 18 Ju.	1	8	8
Prof. Palmer	Philosophy 5	English Philosophy. — Locke. — Berkeley. — Hume	Omitted in 1881–82.		8	
Prof. Bowen	Philosophy 6	Early French and German Philosophy. — Bouillier's Histoire de la Philosophie Cartésienne. — Kant's Critique of Pure Reason. — Bowen's Modern Philosophy	17 Se., 21 Ju.	1	8	8
Prof. Bowen	Philosophy 7	German Philosophy of the Present Day. — Schopenhauer's Die Welt als Vorstellung und Wille. — Hartmann's Philosophie des Unbewussten	5 Se., 1 Gr.	1	8	8
Prof. Dunbar and Dr. Laughlin	Political Econ. 1	Mill's Principles of Political Economy. — Lectures on Banking and the Financial Legislation of the United States	28 Se., 97 Ju., 17 So., 2 Fr., 7 Sp., 1 Sc.	2	8	6
Prof. Dunbar	Political Econ. 2	Cairnes's Leading Principles of Political Economy. — Giffen's Essays in Finance. — Lectures and Theses	21 Se., 9 Ju., 2 Gr.	1	8	8
Dr. Emerton	History 1	Mediaeval and Modern History (introductory to courses six and seven). — Lewis's History of Germany. — Zeller's Histoire d'Italie	1 Se., 8 Ju., 18 So., 1 Fr.	1	2	2
Mr. Macvane	History 2	Mediaeval and Modern History (introductory to course eight). — The Student's Hume. — The Student's History of France	5 Se., 11 Ju., 65 So., 5 Fr., 3 Sp., 1 Sc.	1	2	2
Mr. Macvane	History 8	Constitutional Government in England and the United States (introductory to courses nine and eleven)	11 Se., 15 Ju., 56 So., 1 Fr., 8 Sp.	1	2	2
Prof. Gurney	History 4	Roman History to the Fall of the Republic, with especial reference to the Development of Political Institutions in Greece and Rome. — Mommsen's History of Rome	5 Se., 4 Ju., 5 So., 1 Sp.	1	2	2

ELECTIVE STUDIES. — CONTINUED.

Prof. Gurney	History 5	Later Roman and Early Mediaeval History (from Augustus to Charlemagne) with especial reference to Institutions. — Merivale's History of the Romans under the Empire. — Gibbon's Decline and Fall of the Roman Empire. — Arnold's Roman Provincial Administration	16 Se., 14 Ju., 2 So., 1 Fr., 1 Sp.	1	3	3
Dr. Emerton	History 6	General History of Europe from the beginning of the Ninth to the end of the Thirteenth Century	Omitted in 1881–82		3	
Dr. Emerton	History 7	The Revival of Learning and the Reformation (1300–1550). — Lectures	20 Se., 14 Ju., 2 So., 1 Fr.	1	3	3
Dr. Young	History 8	History of England to the Seventeenth Century (Constitutional and Legal). — Lectures	21 Se., 19 Ju., 2 So., 1 Fr., 2 Sp., 1 Gr.	1	3	3
Dr. Snow	History 9	Constitutional and Political History of the United States to the year 1850. — Lectures	56 Se., 49 Ju., 9 So., 2 Fr., 2 Sp., 1 Sc.	1	3	3
Mr. Macvane	History 10	European History during the Seventeenth Century and the first half of the Eighteenth	Omitted in 1881–82		3	
Mr. Macvane	History 11	European History from the Middle of the Eighteenth Century	62 Se., 53 Ju., 2 So.	1	3	3
Dr. Young	Roman Law 1	Institutes of Gaius and Justinian	17 Se., 8 Ju., 1 Gr., 2 Law.	1	3	3
Prof. Gurney	Roman Law 2	Institutes of Gaius. — Institutes and Digest of Justinian	3 Se., 2 Ju., 1 So.	1	1	1
Mr. Moore	Fine Arts 1	Principles of Delineation, Color, and Chiaroscuro. — Ruskin's Modern Painters, Elements of Perspective, and Elements of Drawing	7 Se., 6 Ju., 10 So., 3 Sp., 2 Sc.	1	2	2
Mr. Moore	Fine Arts 2	Principles of Design. — Ruskin's Modern Painters and Stones of Venice. — Woltman's History of Painting. — Crowe and Cavalcaselle's History of Painting. — Westrop's Handbook of Archaeology	1 Ju.	1	2	2
Prof. Norton	Fine Arts 3	Ancient Art. — Lectures	39 Se., 28 Ju., 5 So., 1 Fr., 2 Sp., 1 Gr., 1 Sc.	1	3	3
Prof. Norton	Fine Arts 4	Art from the Fall of the Roman Empire to the year 1600	Omitted in 1881–82		1	
Prof. Norton	Fine Arts 5	Greek Art	Omitted in 1881–82		2	
Prof. Norton	Fine Arts 6	Romanesque and Gothic Art from 1000 to 1350. — Lectures	13 Se., 11 Ju., 5 So., 2 Fr., 1 Sp.	1	1	1
Prof. Paine	Music 1	Harmony. — Richter's Harmony	3 Ju., 3 So., 2 Sp., 1 Sc.	1	2	2
Prof. Paine	Music 2	Counterpoint. — Richter's Counterpoint	1 Ju., 2 So.	1	3	3
Prof. Paine	Music 3	History of Music. — Von Dommer's Musikgeschichte	5 Se., 2 Ju., 2 So., 2 Fr., 3 Sp.	1	3	3
Prof. Paine	Music 4	The Instrumental Music of Haydn, Mozart, Beethoven, Mendelssohn, and their successors	4 Se., 1 Ju., 1 So., 2 Sp.	1	1	1
Prof. C. J. White	Mathematics 1	Practical Applications of Trigonometry. — Principles of Surveying. — Spherical Trigonometry. — Applications of Spherical Trigonometry to Astronomy and Navigation	3 Se., 3 Ju., 3 So.	1	2	2
Dr. B. O. Peirce	Mathematics 2	Calculus (First Course). — Byerly's Differential Calculus	2 Ju., 27 So., 1 Fr., 1 Sp., 1 Sc.	1	2	2
Dr. B. O. Peirce	Mathematics 3	Todhunter's Theory of Equations. — Minchin's Statics	1 Se., 5 So., 1 Sc.	1	2	2
Prof. Byerly	Mathematics 4	Analytic Geometry (for students who had taken the Maximum Freshman Course in Mathematics). — Lectures	1 Se., 1 Ju., 9 So.	1	2	2
Prof. Byerly	Mathematics 5	Calculus (Second Course). — Byerly's Integral Calculus. — Boole's Differential Equations	2 Se., 5 Ju., 1 So.	1	3	3
Prof. Peirce	Mathematics 6	Analytic Mechanics, with an Introduction to Quaternions. — Clifford's Elements of Dynamic and Kerr's Rational Mechanics, with Selections from other works. — Lectures on Quaternions	1 Se., 5 Ju.	1	3	3

Prof. Eustis	Mathematics 7	Descriptive Geometry and Perspective. — Church's Descriptive Geometry. — Lectures. — Problems in Shades and Shadows, Perspective, and Stereotomy	2 Se., 2 Ju., 1 So, 5 Sc.	1	3	3
	Mathematics 8	Elliptic Functions	Omitted in 1881–82		2	
Prof. Byerly	Mathematics 9	Analytic Mechanics. — Lectures, with Walton's Problems in Theoretical Mechanics, Todhunter's Analytic Statics, Tait and Steele's Dynamics of a Particle, and Routh's Rigid Dynamics, for reference	6 Se.	1	3	3
Prof. Peirce	Mathematics 10	Studies in Quaternions and in Analysis. — Individual study, embracing a wide range of topics, under the supervision of the Instructor	5 Se., 1 Gr.	1	3	3
Prof. Lovering	Physics 1	Astronomy, Optics, and Acoustics. — Herschel's Outlines of Astronomy. — Deschanel on Sound and Light. — Tyndall's Heat as a Mode of Motion	6 Se., 2 Ju., 20 So., 2 Sc.	1	2	2
Prof. Trowbridge	Physics 2	Practical Exercises in the Labortaory, including the use of Instruments of Precision. — Kohlrausch's Physical Measurements. — Pickering's Physical Manipulations. — Everett's Physical Constants	7 Se., 10 Ju., 31 So., 1 Fr., 1 Sc.	1	3	3
Prof. Trowbridge	Physics 3	The Conservation of Energy. — Stewart's Conservation of Energy. — Tait's Recent Advances in Physical Science. — Youmans's Correlation and Conservation of Forces. — Maxwell's Theory of Heat. — Maxwell's Electricity and the Conservation of Energy	7 Se., 13 Ju., 6 So.	1	2	2
Prof. Lovering	Physics 4	Undulatory Theory of Light. — Electricity and Magnetism	Omitted in 1881–82		3	
Prof. Gibbs	Physics 5	The Spectroscope and its Applications	2 Se., 1 Gr.	1	3 till Christmas.	3 till Christmas.
Prof. Jackson & Dr. Mabery	Chemistry 1	Descriptive Chemistry, with Laboratory work	7 Se., 19 Ju., 69 So., 1 Fr., 3 Sp., 2 Sc.	2	3	6
Dr. Melville	Chemistry 2	Determinative Mineralogy and Lithology, with study in the Mineral Cabinet. — Dana's Text-book	13 Se., 14 Ju., 10 So., 1 Sp., 1 Gr., 2 Sc.	1	3	3
Prof. H. B. Hill and Dr. Mabery	Chemistry 3	Qualitative Analysis, with Laboratory work. — Hill's Lecture Notes	6 Se., 27 Ju., 2 So., 1 Sp., 1 Gr., 2 Sc.	1	3	3
Mr. Kinnicutt	Chemistry 4	Quantitative Analysis, with Laboratory Work	4 Se., 6 Ju., 2 Sp.	1	3	3
Prof. H. B. Hill	Chemistry 5	The Carbon Compounds. — Lectures and Laboratory Work	10 Se., 1 Ju., 1 Sp.	1	3	3
Prof. Jackson	Chemistry 6	Advanced Course in Inorganic Chemistry. — Laboratory work	5 Se.	1	3	3
Prof. Cooke	Chemistry 7	Crystallography and the Physics of Crystals, with work in the Mineral Cabinet	Omitted in 1881-82.		3	
Mr. Davis	Natural Hist. 1	Physical Geography and Meteorology. — Lectures	18 Se., 14 Ju., 27 So., 3 Fr., 2 Sp., 5 Sc.	1	3	3
Dr. Mark	Natural Hist. 2	Zoölogy. — Huxley's Elementary Physiology	8 Se., 12 Ju., 26 So., 2 Fr., 2 Sp., 4 Sc.	1	2	2
Prof. Farlow	Natural Hist. 3	Botany. — Gray's Structural Botany. — Gray's Manual of the Botany of the Northern States	6 Se., 11 Ju., 21 So., 1 Sp., 3 Sc.	1	3	3
Mr. Davis	Natural Hist. 4	Geology. — Dana's Manual of Geology. — Lectures and Field work	29 Se., 14 Ju., 19 So., 2 Fr., 1 Sp., 3 Sc.	1	3	3
Prof. Farlow and Prof. Faxon	Natural Hist. 5	Biology. — Lectures and Laboratory work	5 Se., 16 Ju., 6 So., 2 Sc.	1	3	3
Prof. Faxon	Natural Hist. 6	Advanced Zoölogy. — Lectures and Laboratory work	11 Se., 2 Sc.	1	3	3
Prof. Farlow	Natural Hist. 7	Advanced Botany. — Lectures and Laboratory work	5 Se., 3 Ju., 1 Sc.	1	3	3
Mr. Davis	Natural Hist. 8	Advanced Geology. — Lyell's Principles of Geology. — Lectures and Field work	12 Se., 5 Ju., 1 Sc.	1	3	3

the Faculty departed from their previous practice in two important particulars. With the concurrence of the Academic Council, the courses which are designed especially for graduates, and which have hitherto been printed separately, were consolidated with the undergraduate courses, so that all the courses in each department are now included in a single list; and a simpler classification of courses was introduced.

The distinction between graduate and undergraduate studies had lost whatever significance may have been originally attached to it. Its disappearance recalls that of another, now almost forgotten, distinction among elective courses, by which they were classed as Senior, Junior, and Sophomore studies. The former change indicated the direction our system of instruction would take in its development,—its tendency towards growth in the lines of the special departments, to the obliteration of all distinctions among studies, except such as grow out of their characters or mutual relations; the present change may be regarded as a final step in the same direction. The courses in each department now form, as a rule, a progressive series, adapted to the successive stages of a student's progress in that department, but bearing no necessary relation to the time of his graduation. The line that has hitherto been drawn, setting apart graduate from undergraduate studies, has not been observed in practice. Graduate students, particularly candidates for the degree of Master of Arts, have selected their studies indifferently from the two lists, and a large proportion of the students in the graduate courses has always been drawn from the higher college classes. Taking the year 1880–81 as an illustration, we find that the graduate students gave sixty-nine hours a week of attendance to undergraduate courses, fifty-seven to graduate courses; twenty of the one hundred and two undergraduate courses were taken by from one to three graduates; and of the twenty-four graduate courses, seventeen were taken by from one to eight undergraduates. When the graduate courses were first established, their separate publication was perhaps necessary to draw attention to the fact that such instruction was provided. That necessity no longer exists, or exists in a much smaller degree, and the consolidation of the two lists now accomplished gives a much more convenient as well as a more effective presentation of the resources of the University in each department of liberal study.

An incidental result of this change was to bring into greater prominence the unsatisfactory character of the existing classification of studies, which assigned to each course a value, in the sum of work required of a student, proportioned solely to the number of hours a week of attendance which it demanded. A large majority of the undergraduate courses had three exercises a week, but there was a considerable number of two-hour courses, and a small number of one-hour courses. In 1881–82 there were sixty-seven three-hour, twenty-five two-hour, and twelve one-hour courses. That the number of exercises was a very imperfect criterion of the amount of work required in any study was well known to the Faculty. Apart from the inequalities arising from the diversity of the subjects treated and the various methods of instructors, it is evident that, other things being equal, a course having a smaller number of exercises involves a greater amount of work proportionally than one having a larger number. A student who divides six hours of attendance among three courses undertakes a harder task than one who divides the same time between two courses, especially if the studies are in different departments. The studies most underrated in the estimate by hours were one-hour undergraduate courses,— particularly those in Greek and Latin Composition, which require a disproportionately large amount of work outside of the recitation-room, — and the graduate courses. The latter had for the most part less than three exercises a week; the actual numbers in 1881–82 were, of three-hour courses nine, of two-hour courses twenty-four, and of one-hour courses six. These two-hour courses are among the most difficult that a student can take, and the injustice of counting them for less than an undergraduate course of three hours is obvious.

This state of things had come about by gradual growth, with the development of the elective system. No complete remedy for it is possible. No rule can be devised that will exact a uniform requirement of students selecting their work from a wide range of studies such as our system offers. But for this very reason a simple classification of studies is desirable: among courses so varied it is not wise to attempt to draw too fine distinctions. With a view therefore to greater simplicity, the Faculty, abandoning the fallacious standard of the number of hours of instruction, adopted a new system, under which all elective studies are divided into two classes only, known as *courses* and *half-courses*, according to the estimated requirement of work in each. Under this arrangement a student is required to take, each year after his Freshman year, four courses, or an equivalent amount of courses and half-courses. All three-hour studies and all two-hour graduate studies are accounted full courses; all one-hour studies, with one or two exceptions, half-courses. The difficulty in dealing with the two-hour undergraduate courses was partly relieved by the disposition which had shown itself within a few years to enlarge such courses to the full complement of three hours. This had already been done in several instances by instructors who felt that they could not gain a satisfactory hold on the attention and interest of their pupils when they met them only twice a week. The success of the experiment in these cases and the adoption of the new classification combined to give new impulse to the movement, and nine more two-hour courses were now enlarged in the same way. In other instances a consolidation was effected of cognate courses. Of the old two-hour courses not disposed of in either of these ways, three, with some increase of the work required, were classed as full courses, and four, in which the work is lighter, as half-courses. In one instance a half-course was arranged with three exercises a fortnight.

The difficulties attending the transition from the old method were thus successfully overcome. In the application of the new system to new courses no serious difficulty is anticipated. The great majority of courses, it is expected, will have three exercises a week; but in some studies of an advanced character, which are not likely to be undertaken by any but the most capable and industrious students, two meetings a week with the instructor, or even in exceptional cases only one meeting, may be deemed sufficient. On the other hand, the system of half-courses provides a place for such studies as do not cover enough ground to fill out a complete course, and for those which, like Greek and Latin Composition, it is desirable that a student should pursue to a limited extent only, to supplement his study in other courses in the same department.

The changes introduced into the scheme of elective studies, due largely to the adoption of the two measures described above, but partly also to other causes, were numerous and important. The courses designated in the foregoing table as Greek 3, Latin 4, Philosophy 1 and 2, Fine Arts 1 and 5, Mathematics 2, Physics 1, and Natural History 2 were enlarged to three-hour courses; and Greek 11 was enlarged by the addition of one lecture a fortnight. The first two courses in Greek, the two introductory courses in Mediaeval and Modern History, the course in Early English with the graduate course in Beówolf, the first and fourth courses in Music, and the courses in Advanced Analytic Geometry and in the Theory of Equations, were consolidated to form in each case a single full course. The graduate courses in Classical Philology were divided between the Greek and Latin lists, with the exception of the course in Greek and Latin Comparative Philology and the Practice course in Text Criticism and Interpretation, which were placed by themselves under a new head, "Greek and Latin." A course by Professor Allen on the critical study of Homer takes the place of his course on the Mythology of the Greeks and Romans. Professor Allen also takes charge of the course in Practice in speaking Latin, now reduced to one hour a week. In German, composition is to be taught in the first course, which will be conducted by Mr. Lutz, and the separate course in composition, together with the course in Scientific German, is abolished; on the other hand a new course in German classics is established, to be conducted by Professor Cook. In French the course in translation and reading at sight is reduced to two hours a week, and will be conducted by Professor Bôcher; and the course in old French and Provençal is discontinued. Two new half-courses in Philosophy, each consisting of one lecture a week by Professor F. G. Peabody, have been established, — one on the Philosophy of Religion, the other on Ethics in its Relation to Religion. In History, the subject of Professor Emerton's course is changed from the Revival of Learning and the Reformation, to the Protestant Reformation and the Roman Catholic Reaction. The graduate course in Roman Law has been discontinued. In Mathematics an advanced course has been established on Arbitrary Functions and the Theory of the Potential, to be conducted by Professor Byerly and Dr. B. O. Peirce; and the course on Elliptic Functions has been omitted from the list. The most marked increase in the amount of instruction offered has been made in the department of Semitic Languages by the accession of Professor Lyon to the Faculty. The elementary course in Hebrew has been transferred to Professor Lyon, Professor Toy retaining the advanced course in Hebrew and the course in Arabic. The course in Old Testament Isagogics and Antiquities has been discontinued, and the following new courses established: a course in Aramaic, Classical and Jewish, once a week, by Professor Toy; a course in Assyrian, twice a week, by Professor Lyon; and three half-courses, each consisting of one lecture a week, on Quotations from the Old Testament in the New Testament, by Professor Toy, on the Criticism of the Pentateuch, by Professor Toy, and on Babylonian-Assyrian Antiquities, with special reference to Hebrew History, by Professor Lyon. In the foregoing statement temporary omissions of courses and transfers of instructors, owing to the absence of Professors Dunbar, Goodwin, Greenough, and James for the present year, have been passed over in silence, as not permanently affecting the character of the scheme.

The programme of elective courses for the present year, as finally arranged, contains one hundred and thirteen full courses and twenty-six half-courses. The total amount of instruction offered is three hundred and fifty-one and a half hours a week. The number of hours per week of instruction in each department, compared with the number offered in previous years, is as follows: —

Number of exercises per week in elective courses offered in	1871–72	1872–73	1873–74	1874–75	1875–76	1876–77	1877–78	1878–79	1879–80	1880–81	1881–82	1882–83
Semitic Languages .	..	3	3	3	3	3	3	4	4	11	8	13
Sanskrit and Zend .	..	3	3	6	3	3	3	6	6	11	10	10
Greek	24	25	22	23	25	23	23	24	26	29	25	25½
Latin	10	15	15	15	19	20	18	22	18	22	26	23
Greek and Latin . .	..	..	..	..	3	3	2	2	3	3	3	3
English	6	8	8	5	8	11	14	15	16	16	16	15
German	9	8	8	11	14	17	19	24	25	22	23	23
French	14	14	14	18	12	15	15	15	15	14	18	14
Italian and Spanish	11	11	11	14	17	17	17	19	20	20	20	18
Philosophy . . .	12	12	12	9	9	12	12	18	23*	24	17	21
Ethics	3	3	3	3	3	3	3	3	3	3	8	3
Political Economy .	3	3	3	6	6	6	6	6	9	9	7	7
History	15	17	17	20	20	23	23	25	25*	30	35	35
Roman Law . . .	..	3	..	3	3	3	3	3	4	4	5	4
Music	3	5	8	11	14	11	12	13	13	15	14	14
Fine Arts	..	..	..	6	9	4	6	9	8	6	8	11
Mathematics . . .	21	24	20	24	20	23	24	28	30	26	26	24
Physics	12	12	12	14	15	15	17	22	21	19	19	20
Chemistry . . .	11	11	14	14	14	18	18	21	26	26	23	23
Natural History . .	14	20	23	23	23	25	24	30	42	46	36	45
Aggregate . .	168	197	196	228	240	255	262	308	337	356	347	351½

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* Elective courses amounting to four hours a week in Philosophy and six hours in History were established in 1878 to take the place of the prescribed work in those subjects, which was abolished at that time. They formed no actual increase in the amount of instruction given.

The recent enlargement of the instruction in Semitic Languages and in Sanskrit and Zend has now enabled the Faculty to provide Honors for an extended course of study in each of those departments. Honors have also been established in Political Science, the necessary courses of study being made up from the departments of Political Economy, History, and Roman Law.

In 1876 the Faculty began in a cautious way to admit to the elective courses persons who had not had the advantage of a regular preparation for college and were past the age when such preparation was possible or expedient for them, but who, nevertheless, were sufficiently trained in special lines of study to pursue with profit the courses of instruction in certain departments. The restrictions originally placed on the admission of this class of persons, who were known as unmatriculated students, have been gradually removed, until now all the courses of study in the College are open to any person of good moral character who satisfies the Faculty of his fitness to pursue the particular courses he elects. The number of such students has never been large; last year there were thirty-four, and forty-five are in attendance this year. Their character has been various. Many have made excellent use of the opportunities offered, some for purposes of special study, others to supplement an imperfect or irregular training by such studies as would enable them to gain admission to one of the higher college classes. On the other hand, some have undoubtedly taken advantage of this means of securing a connection with the University, who have come with no serious purposes of study. In order to improve the condition of the former and either exclude the latter or place them under better control, the Faculty last year took steps to define more carefully the relation of this class of students to the College, and established regulations which, while subjecting them to stricter discipline, considerably enlarged their privileges. They are to be known henceforth as Special Students; they are members of the College from the time of their admission, and subject to the College regulations, the Faculty reserving the right to deprive any one of his privileges who abuses or fails to use them. In their studies they are substantially on an equal footing with undergraduates in all respects except that they are not candidates for any degree. But no inducements are held out to enter the College in this way except to persons of ability and diligence.

No certificate is given to a special student for any course of study unless he has attained seventy-five per cent of the maximum mark in that course. On the other hand, any special student who has attained an average of seventy-five per cent in twelve elective courses — that is, in an amount equivalent to the whole elective work required of an undergraduate — will receive a certificate to that effect on Commencement Day, and have his name printed on the Commencement programme; and a Special Student may compete for Honors on the same terms as an undergraduate.

Another subject to which the Faculty gave much attention last year was the anticipation of Freshman studies. For a number of years past a candidate for admission has been permitted to present himself for examination, at the beginning of the Freshman year, on the prescribed work in Greek, Latin, Mathematics, Physics, French, or German, and if successful to take advanced studies in his Freshman year in place of those anticipated. This provision has been made use of every year by a small number of students who have had time and opportunity before coming to College to pursue their studies beyond the mere requirements for admission, and who by this means were enabled to cover a wider range of subjects in their college course, or to carry their studies farther in any special department which their taste led them to prefer. But a student who anticipated Freshman studies was not at all advanced thereby towards the attainment of his degree. The elective studies taken in place of those anticipated were counted in their stead as part of his Freshman work, and he entered his Sophomore year under the same conditions as his classmates.

The deliberations of the Faculty last year resulted in the conclusion that the time had come for a change of policy in this matter. The old rule was adopted at a time when the elective courses had not yet thrown off the restraints to which they had been subject as prescribed studies, when their scope was comparatively limited, and to exempt a student from a part of the work of his class was to give him less than adequate employment for his time, and to expose him to the temptations of idleness. The conditions under which a student now pursues his studies are far different. The elective system in its present state provides a large number of courses on which the time that may be spent by a student is practically unlimited; and it is no uncommon thing for the most industrious students to devote themselves almost wholly to two or three studies in which they are especially interested, gaining the time for this by taking one or two easy courses to eke out their stint, and expending on these no more effort than is necessary to secure a high mark. The imposition of a uniform requirement for each year, however necessary in general, is a useless restraint in cases like these, and diverts a certain amount of effort from earnest and fruitful study to work of greatly inferior value. Under these circumstances it seems desirable not only to encourage students of the better class to anticipate a part of the work of the Freshman year, but to permit them to use the time thus gained for more extended study, if they so desire, in particular courses. The rule adopted by the Faculty provides that when a student, besides passing a creditable examination for admission, has passed with credit on any of the studies of the Freshman year, the work required of him in his college course shall be reduced by the amount anticipated; the reduction to be distributed among the four years at his own option, provided that it shall not in any year exceed the amount of one full course of study.

On the other branch of this subject, — the question of shortening the term of residence ordinarily required for the degree, — the Faculty proceeded more cautiously. They published a rule, that if a student has anticipated Freshman studies having an aggregate of nine hours a week of recitations and lectures, he may be admitted at once to the Sophomore class, on condition of performing the remaining work of the Freshman year — represented by about seven exercises a week — in the ensuing three years; but in this they have simply formulated the existing practice in the admission of candidates to the Sophomore class. They have, however, further announced that if a student who has anticipated Freshman studies amounting to less than nine hours, but still a substantial portion of the year's work, should desire to fulfil the requirements for the degree in three years, he may apply for leave to do so. The Faculty reserve their decision on applications of this kind until the circumstances of each case shall be known; but the announcement that such applications will be considered is an important step, and the response of future candidates to the suggestion thus thrown out will be awaited with interest.

CLEMENT L. SMITH, *Dean*.

December 1, 1882.

To the President of the University: —

Sir, — I have the honor to submit the following Report on the state of the Graduate Department during the academic year 1881–82: —

Forty-two courses of instruction, arranged with special reference to graduates, were offered this year, under the heading of Graduate Courses, and by vote of the Academic Council. The number of these courses actually given was thirty-one, and the accompanying table shows the numbers and status of the persons in attendance upon them.

Instruction was also given by Professor Whitney, in Geology and Lithology, to two candidates for higher degrees.

A course in Zend given by Professor Lanman, in the year 1880–81, was accidentally left unnoticed in my last annual report.

On the 21st of December, 1881, the Council voted, at the suggestion of the College Faculty, to discontinue the separation between graduate and undergraduate courses. Thus the University has returned to the system which existed before 1877–78, of presenting only one list of studies for graduates and undergraduates alike. The separation between the two classes of studies has had a valuable influence in drawing attention to the courses offered to advanced students, and also in stimulating the interest of the academic boards in these courses, and increasing their number and variety. But now that this service has been accomplished, it seems unadvisable to keep up a distinction which rests on no clear principle. In practice, the so-called graduate courses have been largely taken by undergraduates; while graduates have often found in the College list the instruction which it was most desirable for them to follow. A sharp line of division cannot now be drawn between graduate students and seniors, any more than between the successive undergraduate classes.

Six persons were admitted this year to candidacy for the degree of A.M.; and the whole number of candidates for the degree was ten, of whom four withdrew, either in the course, or after the expiration, of the year. Five received the degree, and one still continues his candidacy.

Fourteen persons were admitted to candidacy for the degree of Ph.D.; and the whole number of candidates for that degree was

Courses.	Teachers.	Subjects.	Hours per Week.	Students.	Total No. of Students
Semitic Languages *a.*	Prof. Toy	Hebrew Grammar. Parts of Genesis, Judges, and Psalms. Written exercises	3	2 Se., 10 Di.	12
" " *b.*	Prof Toy	Hebrew Syntax. Lectures on Old Testament text-criticism. Amos, Ecclesiastes, and parts of Kings, Daniel, Job, Psalms, and the Targums. Essays by Students	2	6 Di.	6
Sanskrit *a.*	Prof. Lanman	Sanskrit Grammar. Selections from the Laws of Manu, the Veda, the Brahmanas, and the Sûtras	3	2 Se.	2
" *b.*	Prof. Lanman	Hymns of the Rigveda. The book Pâushya of the Mahâ-bhârata. The entire drama, Kâlidâsa's Sakuntalâ	2	1 Gr.	1
Classical Philology *b.*	Prof. Goodwin	Plato (Theaetetus). Aristotle (Politics, three books; and Metaphysics, one book). Zeller's History of Greek Philosophy, Vols. I. and II.	2	2 Se., 6 Gr.	8
" " *c.*	Prof. Sophocles	Pindar	2	2 Gr.	2
" " *d.*	Prof. Lane	Quintilian (Book I.). Allen's Early Latin Remnants. Gellius (Selections). Theses	2	2 Se., 9 Gr.	11
" " *e.*	Prof. Allen	Lectures on the History of the Roman Drama; Structure of Plays; Scenic Antiquities; Metres. One play of Plautus, and fragments of chief tragic and comic poets	2	1 Se., 4 Gr.	5
" " *g.*	Prof. Allen	Lectures on Greek and Roman Religion and Religious Institutions	2	3 Se., 3 Gr.	6
" " *h.*	Prof'rs. Allen and Smith	Practice in Text-criticism and Interpretation.—Aristophanes (Knights); Propertius — Discussion of theses on philological subjects.	2	1 Se., 10 Gr.	11
Modern Languages *a.*	Prof. Child	Beówulf	1	8 Se.	8
" " *b.*	Mr. Sheldon	Sievers's Grundzüge der Phonetik. Heyne's Ulfilas. Written work in Phonetics and Gothic, Braune's Althochdeutsches Lesebuch begun	2	8 Se.	8
" " *c.*	Mr. Sheldon	Hartmann von Aue (Der arme Heinrich and some of the Lieder.) Das Nibelungenlied. Walther v. d. Vogelweide (Selections.) Written work	3	2 Se., 1 Ju., 1 Fr., 1 Sp.	5
" " *d.*	Mr. Bendelari	Old French and Provençal	3	1 Se., 1 Ju.	2
Philosophy *b.*	Prof. James	Advanced Psychology. (Course discontinued in March)	2	2 Gr., 2 Med.	4
Political Economy *a.*	Prof. Dunbar	Public Finance	1	4 Se., 5 Gr.	9
History *b.*	Prof. Torrey	Elements of Public International Law; History of Modern Treaties	3	7 Se., 1 Ju., 1 Gr., 1 Law	10
" *c.*	Prof. Torrey	Forms of Government and Political Constitutions (particularly in Continental Europe) since 1789	2	7 Se.	7
" *d.*	Dr. Young	Legal Institutions of the Franks and Anglo-Saxons	3	8 Se.	8
" *e.*	Prof. Everett	Studies in the Comparative History of Religions	2	2 Gr. 10 Di.	12
Music *a.*	Prof. Paine	Canon and Fugue (study and composition)	2	6 Se.	6
" *b.*	Prof. Paine	Instrumental Music (Rondos, Nocturnes, Sonatas, and other free forms)	3	7 Se.	7
Mathematics *a.*	Prof. Peirce	Gauss's Theoria Motus, Book I.	1	1 Sci.	1
Physics *a.*	Prof. Trowbridge	Experimental Physics, with Laboratory work	3	1 Se.	1
" *b.*	Prof. Trowbridge	Maxwell's Electricity and Magnetism	3	2 Se., 2 Sci.	4
Chemistry *a.*	Prof. Storer	Agricultural Chemistry	2	2 Bussey	2
Natural History *a.*	Dr. Mark	Embryology, with Laboratory work. (Attended for a part of the year by six students)	1	1 Gr., 2 Sci.	3
" " *e.*	Prof. Farlow	Anatomy and Development of Higher Cryptogams	3*	1 Gr.	1
" " *f.*	Prof. Farlow	Anatomy and Development of Fungi and Algae	3†	1 Gr.	1
" " *g.*	Prof. Slade	Anatomy and Histology of Domestic Animals, with exercises in Dissection ‡	4	4 Sp.	4

* First half year. † Second half year. ‡ From November 1, to May 1.

twenty-eight, of whom three have withdrawn, or suffered their candidacy to lapse, and twenty-five are still candidates. Two of these twenty-five candidates were admitted to the degree of A.M. at the last Commencement.

One person was admitted to candidacy for the degree of S.D.; and the number of candidates for that degree was five, of whom one attained the degree, and four are still candidates.

The names of those members of the Graduate Department who received degrees at Commencement, 1882, are as follows: —

A.M.

Le Baron Russell Briggs, A.B., 1875.
Edward Southworth Hawes, A.B., 1880.
John Norton Johnson, A.B., 1881.
Charles Henry Morss, A.B., 1880.
Charles Robert Sanger, A.B., 1881.
Frank Webster Smith, A.B., 1877.
Edmund Allen Whitman, A.B., 1881.

S.D.

LEONARD PARKER KINNICUTT, S.B. (*Mass. Inst. Technol.*), 1875.

Department, Physics. *Subject*, Chemistry. *Thesis*, "The Formation of Phenylglyceric Acid from Cinnamic Acid Bibromide."

The Parker Fellowships were held by

Joseph Silas Diller, S.B, 1879,
Frank Hugh Foster, A.B., 1873,
Washington Irving Stringham, A.B., 1877,
(Ph.D. *Johns Hopkins Univ.*), 1880,
George Lincoln Walton, A.B., 1875, M.D. 1880;

and the Kirkland Fellowship by

Paul Shorey, A.B., 1878.

Mr. Foster resigned his fellowship at the end of the academic year, after having been nominated for reappointment. All the other incumbents were reappointed; and

Edward Emerson Phillips, A.B., 1878, Ph.D., 1880,

was appointed to a Parker Fellowship, for the year 1882–83, in place of Mr. Foster.

After the close of the academic year, Dr. Stringham resigned his fellowship, in consequence of his accepting an appointment to the principal Professorship of Mathematics in the University of California. He had held his fellowship for two years, during which he had carried on important studies at the University of

Leipzig. He was most desirous to defer entering on his new professorship, so as to complete his plan of work by remaining abroad another year; but he found it impossible to effect this arrangement.

Frank Nelson Cole, A.B. 1882, has been appointed to a Parker Fellowship, for the year 1882–83, in place of Dr. Stringham.

A new fellowship was instituted in the course of the year by the gift of friends of the University, to be named the "James Walker Fellowship," in memory of the late President Walker, and to be given, by preference, to a student of those branches of Intellectual and Moral Philosophy to which Dr. Walker devoted his life. This fellowship was awarded for the year 1882–83 to

Benjamin Rand, A.B., 1879, A.M., 1880.

The prize offered by Mr. Robert Noxon Toppan (A.B., 1858), in the year 1879–80, for the best essay on some subject in political science, was awarded, at the close of this year, to

Frank William Taussig, A.B., 1879,

a candidate for the degree of Ph.D., for his essay on "Protection to Young Industries as applied in the United States."

The Academic Council voted, Oct. 21, 1881, to recommend to the Corporation and Overseers to alter section 5 of the Standing Rules relating to the degrees of A.M., Ph.D., and S.D., so as to make it read as follows: —

"5. The Academic Council will recommend for the degree of Master of Arts candidates otherwise properly qualified, who, after taking the Bachelor's degree, shall pursue for at least one year at the University a course of liberal study approved by the Council, and shall pass with high credit an examination on that course. The Council will designate from time to time those courses of instruction in the Professional and Scientific Schools which will be accepted for the degree of A.M."

The Council also voted to recommend the repeal of section 6 of the Standing Rules.

These recommendations were adopted by the Corporation and Overseers, with a slight verbal alteration.

JAMES MILLS PEIRCE, *Secretary of the Academic Council.*

TO THE PRESIDENT OF THE UNIVERSITY: —

SIR, — As Dean of the Theological Faculty, I respectfully submit the following Report for the academic year 1881–82: —

Thirty-two students were connected with the School during the year, as follows: —

Resident Graduates	4
Senior Class	5
Middle Class	4
Junior Class	8
Special Students	11

Of these, two resident graduates and one member of the middle class left early in the year, so that the number of students was practically twenty-nine. Three undergraduates recited in Hebrew, two candidates for the degree of A.M. attended the lectures on Comparative Religion, and one those on Systematic Theology.

The nature and amount of the work of the School may be learned from the accompanying table, pp. 82, 83.

The theological instruction of the School was this year supplemented by a course of twelve lectures by Alexander McKenzie, D.D., on the Theology of the New Testament. These lectures were not only valuable in themselves, but were important as presenting the subjects treated from a point of view different from that occupied in the regular course on Systematic Theology. They may serve to illustrate the plan of the School by showing the breadth of instruction which it would gladly give if it were able. Meanwhile, such a course given every year, by representatives of different types of Theology, cannot fail to be instructive and stimulating to the students who attend them.

I express with pleasure the indebtedness of the School to Joseph Henry Allen, A.M., who for four years has filled the position of lecturer on Ecclesiastical History. During this time he identified himself with the School, giving to it the full advantage of his varied learning, his industry, and his enthusiasm.

The year has been marked by the addition to the School of two professors — one filling the recently established Winn Professorship of Ecclesiastical History, and the other, the Hollis Professorship of Divinity, which had been so long vacant. Ephraim Emerton, Ph.D., who has been called to the former position, had already, as instructor in the College, shown himself to be a successful student and teacher in a field of study in part identical with that to which he is now to devote himself.

It would be impossible for any one teacher in these days to perform properly all the duties which were originally assigned to the Hollis Professor. Happily this very breadth of range, which requires a selection from among the functions prescribed, makes it possible, at any time, to use this professorship in such a way as to meet the special needs or opportunities of the School. It has thus, fortunately, been able to secure the services of David Gordon Lyon, Ph.D., who has already distinguished himself as a student of Assyriology. The introduction of this study makes the Semitic department of the University especially strong, and supplies to the students of Theology instruction which late investigations have shown to be very important for the comprehension of the Old Testament. Professor Lyon, also, by taking the Junior class in Hebrew, leaves Professor Toy free to give more lectures on the questions which make the study of the Old Testament so interesting and important at the present day.

The connection of Professors Toy and Lyon with the School may illustrate still further the wisdom and the feasibility of the idea which it represents, by which the range of its possible selection of teachers is made so much larger than that within which most seminaries of Theology are confined.

A new lecture room was constructed in Divinity Hall last summer. This addition was made necessary by the greater number of teachers to be accommodated, and by the fact that most of the lectures are now given early in the day.

It gives me pleasure to record an important change in the requirements for entering the School. Henceforth only graduates of some college, or persons who give evidence of an education equal to that of a college graduate, will be admitted to candidacy for the degree of B.D., while an examination similar to that before required for becoming a candidate for the degree must be passed in order to enter the School as a special student. It is expected that some loss in the number of students may attend the change, but it is believed that this loss will be more than balanced by a greater uniformity of attainment among the students, which will make the teaching of the School more effective. It was felt, also, that it should be the aim of the School to elevate the standard of education in the ministry.

Instructor.	Subjects and Methods of Study.	Number of Students.	Exercises per Week.
	JUNIOR CLASS.		
Prof. Abbot.	New Testament; Textual Criticism of the New Testament; Exegesis of Gospel of Matthew, chapters i.–xiii. Lectures and Recitations. Dissertations by students.	12	2
Prof. Toy.	Hebrew Forms in Davidson's Grammar with written translations from English into Hebrew and from Hebrew into English. Portions of Genesis, Judges, Ezekiel, and Psalms read. Lectures on the Ethics of the Old Testament.	15	3
Prof. Peabody.	Homiletics; Structure and Analysis of Sermons. Lectures.	15	1
Prof. Peabody.	Philosophy of Religion; Lectures.	18	1
Mr. Allen.	Ecclesiastical History, First Period, to end of eighth century; Lectures, with discussions, and constant reference to original authorities.	10	2
Mr. Ticknor.	Elocution. Class exercises.		
	MIDDLE CLASS.		
Prof. Abbot.	New Testament; Exegesis of the Gospel of Matthew, chapters xiv.–xxviii., Critical Introduction to Gospel of John and Exegesis of chapters i.–iv.	6	2
Prof. Everett.	Comparative Religion; Studies of Vedic, Avestan, Buddhist, and Chinese Religions; with constant reference to translations and other works reserved for the use of students.	12	2
Prof. Everett.	Systematic Theology begun; Elements of Religion.	6	1
Prof. Toy.	Biblical Aramaic; Forms in Riggs's Grammar, and Hebrew Syntax in Gesenius. Reading from Daniel, Ezra, the Targums, Amos, Job, and Ecclesiastes. Lectures on Textual Criticism with examination of the text of 1 Samuel.	5	2
Prof. Peabody.	Homiletics; Sermons preached by the students before the two upper classes and criticised by students and teacher.	15	2

MIDDLE CLASS — CONTINUED.

Prof. Peabody.	Ethics; Lectures, Discussions, and Essays.	9	1
Mr. Allen.	Ecclesiastical History, Second Period, from ninth to fifteenth century inclusive. Chief authorities, Milman's Latin Christianity and Greenwood's Cathedra Petri. The students were also referred to other sources. — Lectures, Discussions, and Essays.	5	2
Mr. Ticknor.	Elocution. Each student thirty minutes a week.		

SENIOR CLASS.

Prof. Abbot.	New Testament; Exegesis of John iii.–xxi.; Critical Introduction to the Epistle to the Romans, and Exegesis of chapters i.–iv.	7	2
Prof. Everett.	Systematic Theology; Lectures and Essays.	7	3
Prof. Toy.	Old Testament; Lectures on the Formation of the Canon. Reading of Ewald's "Antiquities of Israel."	6	1
Prof. Peabody.	Homiletics, as in middle year.		
Prof. Peabody.	Pastoral Care; twelve Lectures, open to all students.	24	
Mr. Allen.	Ecclesiastical History, Third Period, from beginning of sixteenth century to the present time; Lectures and Discussions.	6	2
Mr. Ticknor.	Elocution. Each student forty-five minutes a week.		

LECTURES TO THE SCHOOL.

Prof. Toy.	The Messianic Thought of the Old Testament.	Twenty Lectures.
Mr. Allen.	The History of Modern Liberalism in Theology, forming part of the course to the Seniors but open to all students.	Twelve Lectures.
Mr. McKenzie.	The Theology of the New Testament.	Twelve Lectures.

GENERAL EXERCISES.

Preaching by some student every Friday evening, open to the public; the sermon submitted in advance to the teacher of Homiletics.

Extempore speaking once in two weeks; with criticism.

Conference meeting, conducted by students, the Faculty being present and taking part, once in two weeks (alternating with the above).

Morning prayers, conducted by students and teachers.

The School has been fortunate in retaining for a third year as Librarian C. J. Staples, B.D., to whose services I made reference last year. Ninety-eight books were added to the Library during the year. Forty-six volumes of a miscellaneous nature were transferred to Gore Hall. In all, one thousand and thirty-seven volumes have been thus transferred. There now remain in the Divinity Library only works relating to the study of Theology. The preparation of the card catalogue has been advanced, and that of a subject catalogue, including references to important articles in the periodicals received, has been begun. The circulation of the year, exclusive of text-books, has been twelve hundred and ten. The Librarian urges the importance of preserving in the Library pamphlets relating to the theological questions of the day. Many of these, which may now seem of small value, will in the future be of great importance, as illustrating the thought and temper of the time. Arrangements have been made for cataloguing pamphlets that may be received.

C. C. EVERETT, *Dean.*

To THE PRESIDENT OF THE UNIVERSITY: —

SIR, — I beg to submit the following Report upon the Law School for the academic year 1881–82: —

The table on pp. 86, 87 gives the courses of study and instruction during the year, the names of the instructors, the text-books used, the number of exercises per week in each course, and the number of students who offered themselves for examination in each course at the end of the year.

The following table exhibits the attendance at the School during the last twelve years: —

	1870–71.	1871–72.	1872–73.	1873–74.	1874–75.	1875–76.	1876–77.	1877–78.	1878–79.	1879–80.	1880–81.	1881–82.
Whole number of students in the School	165	138	117	141	144	173	199	196	169	177	161	161
Number that were in the School during the whole year	107	107	109	121	130	153	168	172	137	138	136	139
Number that were in the School only part of the year	58	31	8	20	14	20	31	24	32	39	25	22
Average number	136	123	113	131	137	163	184	183	154	157	149	146

The following table exhibits the School as divided into classes since the establishment of the three years' course and the examination for admission: —

	1877-78.	1878-79.	1879-80.	1880-81.	1881-82.
First Year	72	63	78	57	61
Second Year . . .	79	50	32	58	41
Third Year. . . .	—	—	21	14	25
Special Students. .	31	47	46	32	34

In regard to the foregoing table, it is to be observed that, although the three years' course went into operation at the beginning of 1877–78, there was no third-year class until 1879–80. It is also to be observed that the second-year class of 1877–78 did not take the three years' course, but was graduated at the end of the second year, that class having entered the School before the three years' course went into operation.

The following table exhibits the results of the examinations for admission in each year since they were established: —

	1877-78.	1878-79.	1879-80.	1880-81.	1881-82.
Offered	16	15	18	25	19
Admitted . . .	7	7	12	13	16

The following table exhibits the results of the examinations for a degree in each year since the establishment of the three years' course: —

	1877-78.			1878-79.			1879-80.			1880-81.			1881-82.		
	Offered.	Passed.	Failed.	Offered.	Passed.	Failed.	Offered.	Passed.	Failed.	Offered.	Passed.	Failed.	Offered.	Passed.	Failed.
First Year .	66	51	15	50	42	8	73	69	4	45	43	2	49	44	5
Second Year	66	47	19	40	39	1	28	26	2	49	46	3	38	37	1
Third Year .							22	18	4	18	18	0	36	33	3

Instructors.	Studies and Text-books.	Exercises per week.	Number of students examined.
	FIRST YEAR.		
Prof. Gray.	Real Property. No text-book.	2	48
Prof. Langdell.	Contracts. Langdell's Cases on Contracts.	3	56
Mr. Howland.	Torts. Ames's Cases on Torts.	3	49
Prof. Thayer.	Criminal Law and Criminal Procedure. No text-book.	1	49
Prof. Ames.	Civil Procedure at Common Law. Ames's Cases on Pleading.	1	48
	SECOND YEAR.		
	HONOR COURSE.		
Prof. Thayer.	Evidence. No text-book.	2	27
Prof. Langdell.	Jurisdiction and Procedure in Equity. Langdell's Cases in Equity Pleading.	2	27
Prof. Gray.	Property. No text-book.	2	27
Prof. Ames.	Trusts and Mortgages. Ames's Cases on Trusts.	2	27
	ORDINARY COURSE.		
	Elective Subjects.		
Prof. Thayer.	Evidence. No text-book.	2	19
Prof. Langdell.	Jurisdiction and Procedure in Equity. Langdell's Cases in Equity Pleading.	2	4
Prof. Gray.	Property. No text-book.	2	18
Prof. Ames.	Trusts and Mortgages. Ames's Cases on Trusts.	2	10
Prof. Thayer.	Sales of Personal Property. Langdell's Cases on Sales.	2	8
Prof. Ames.	Bills of Exchange and Promissory Notes. Ames's Cases on Bills and Notes.	2	6

THIRD YEAR.

	HONOR COURSE.		
	Required Subjects.		
Prof. Langdell.	Jurisdiction and Procedure in Equity. Langdell's Cases on Equity Jurisdiction.	1	18
Prof. Ames.	Partnership and Corporations. Ames's Cases on Partnership.	2	18
	Elective Subjects.		
Prof. Thayer.	Sales of Personal Property. Langdell's Cases on Sales.	2	18
Prof. Ames.	Bills of Exchange and Promissory Notes. Ames's Cases on Bills and Notes.	2	11
Prof. Gray.	Conflict of Laws. No text-book.	1 *	4
Prof. Thayer.	Constitutional Law. No text-book.	1 †	4
Prof. Thayer.	Agency and Carriers. No text-book.	1	10
Prof. Gray.	Wills and Administration. No text-book.	1	9
Prof. Gray.	Jurisprudence. Austin on Jurisprudence.	1	7
	ORDINARY COURSE.		
	Elective Subjects.		
Prof. Langdell.	Jurisdiction and Procedure in Equity. Langdell's Cases on Equity Jurisdiction.	1	6
Prof. Ames.	Partnership and Corporations. Ames's Cases on Partnership.	2	19
Prof. Thayer.	Sales of Personal Property. Langdell's Cases on Sales.	2	17
Prof. Ames.	Bills of Exchange and Promissory Notes. Ames's Cases on Bills and Notes.	2	17
Prof. Gray.	Conflict of Laws. No text-book.	1 *	2
Prof. Thayer.	Constitutional Law. No text-book.	1 †	2
Prof. Thayer.	Agency and Carriers. No text-book.	1	12
Prof. Gray.	Wills and Administration. No text-book.	1	15
Prof. Gray.	Jurisprudence. Austin on Jurisprudence.	1	6
Prof. Ames.	Trusts and Mortgages. Ames's Cases on Trusts.	2	1
Prof. Langdell.	Jurisdiction and Procedure in Equity (2d year). Langdell's Cases in Equity Pleading.	2	2

* For the first half of the year.

† For the last half of the year.

In regard to the foregoing table, it is to be observed that it includes no special students, and hence that all the applicants included in it were either graduates of colleges, or had passed the examination for admission. Of course this remark does not apply to the second-year class of 1877–78, and this accounts in part for the much greater number of failures in that class.

The following table exhibits the number of students who, since the establishment of the three years' course, have been examined for a degree in the studies of any year without having been members of the School during that year: —

	1877-78.			1878-79.			1879-80.			1880-81.			1881-82.		
	Offered.	Passed.	Failed.	Offered.	Passed.	Failed.	Offered.	Passed.	Failed.	Offered.	Passed.	Failed.	Offered.	Passed.	Failed.
First Year . .	5	2	3	3	2	1	6	4	2	6	4	2	2	1	1
Second Year .							1	1	0						
Third Year .							5	4	1	4	4	0	10	8	2

The following table exhibits the results of the examinations for the honor degree in each year since it was established: —

	1878-79.			1879-80.			1880-81.			1881-82.		
	Offered.	Passed.	Failed.	Offered.	Passed.	Failed.	Offered.	Passed.	Failed.	Offered.	Passed.	Failed.
Second Year .	26	12	14	17	7	10	39	16	23	27	11	16
Third Year .				9	7	2	5	3	2	13	10	3

The following table exhibits the number of students who have entered the School in each year during the last twelve years, and shows how many of them were graduates of colleges, and, of the latter, how many were graduates of Harvard and how many of other colleges.

	1870–71.	1871–72.	1872–73.	1873–74.	1874–75.	1875–76.	1876–77.	1877–78.	1878–79.	1879–80.	1880–81.	1881–82.
Whole number of entries	105	92	87	95	102	119	128	111	102	124	91	97
Graduates of colleges	60	56	47	58	55	67	77	79	62	76	60	53
Harvard graduates .	19	26	22	29	40	39	47	47	38	59	41	29
Graduates of other colleges	41	30	25	29	15	28	30	32	24	17	19	24
Non-graduates . . .	45	36	40	37	47	52	51	32	40	48	31	44

C. C. LANGDELL, *Dean*.

To the President of the University:

Sir, — As Dean of the Medical Faculty, I submit the following Report upon the Medical School for the academic year 1881–82:

The whole number of students in attendance during the year was two hundred and fifty; during the first term two hundred and forty-six; during the second two hundred and thirty-five. Of these, one hundred and twenty-eight had a literary or scientific degree. There were ninety-five applicants for the degree of Doctor of Medicine, of whom eighteen were rejected. Seventy-seven passed the examination and received their degrees. The Barringer Scholarships were awarded to Henry Fiske Adams and Henry Austin Wood of the Fourth Class. The other Scholarships were awarded to John Abbott Crosby and Alton Atwell Jackson of the Third Class, and Oscar Joseph Pfeiffer and Leonard Wood of the Second Class.

The Fourth Class was composed of ten students, of whom nine passed the examination, five of these *cum laude;* three received hospital appointments; one took the ordinary degree of M.D.; one postponed graduation to become a candidate for a hospital.

The remarks made in the last Report with regard to the fourth year might be repeated in this. It is still too early to determine the results of this additional effort to improve medical education. We can only say that, if expressed intention of prolonging the term of study be an index of progress, progress has been made. The chief difficulty still remains: we are in competition with the hospitals, which claim an important number of the best students, before they have completed a proper course of study.

COURSES OF INSTRUCTION FOR 1881–82.

Instructors.	Subjects.	Exercises per Week.
	FIRST CLASS.	
Prof. Holmes	Descriptive Anatomy	Four till May.
Drs. Beach, Waterman, M. H. Richardson, and Otis	Practical Anatomy, with Exercises in Dissection	Fifteen, January till May.
Drs. Dwight & Quincy	Laboratory Exercises in Histology	Two till May.
Dr. C. S. Minot	Embryology	Twelve Lectures.
Prof. Bowditch	Systematic and Experimental Physiology	Four.
Dr. J. W. Warren	Laboratory Exercises in Experimental Physiology	November till May.
Dr. Hills	General and Analytical Chemistry	Two, with ten additional exercises.
Dr. Hills	Practical Exercises in the Laboratory for General Chemistry	Six.
	SECOND CLASS.	
Dr. Dwight	Topographical Anatomy	One.
Drs. Beach, Waterman, M. H. Richardson, & Otis	Practical Anatomy, with Exercises in Dissection	Five till May.
Prof. Wood	Medical and Toxicological Chemistry	Two.
Prof. Wood & Dr. Emerson	Practical Exercises in the Laboratory for Medical Chemistry	Six.
Dr. Bolles	Materia Medica, with Practical Demonstrations	One.
Prof. Fitz	General Pathology and Pathological Anatomy	Two.
Prof. Fitz	Special Pathological Anatomy, with Demonstrations	Two.
Drs. Cutler & Whitney	Laboratory Exercises in Pathological Histology	Two till April.
Prof. Fitz & Dr. Cutler	Practical Instruction in performing Autopsies	Throughout the year.
Profs. Minot & Edes	Clinical Medicine	Four.
Drs. Mason, Shattuck, & Garland	Practical Instruction in Auscultation and Percussion	Six first half-year.
Dr. Knight	Practical Diagnosis and Treatment of Diseases of the Larynx	Six first half-year.
Dr. Warren	Recitations in Surgical Pathology	One first half-year.
Dr. Warren	Recitations in Surgery	One second half-year.
Dr. Warren	The Application of Bandages and Apparatus	One second half-year.
Drs. Warren & W. S. Bigelow	Laboratory Exercises in Surgical Histology	Two after March.
Prof. Bigelow	Clinical Surgery	Two first half-year.
Prof. Cheever	Clinical Surgery	Two till April.
Dr. Porter	Clinical Surgery	Two second half-year.
	THIRD CLASS.	
Prof. Edes	Therapeutics	Three.
Prof. Reynolds	Theory and Practice of Obstetrics	Three.
Dr. W. L. Richardson	Recitations in the Theory and Practice of Obstetrics	One.
Dr. W. L. Richardson	Operative Obstetrics	Twelve practical exercises.
Dr. W. L. Richardson	Practical Instruction in Clinical Obstetrics	Throughout the year.
Prof. Minot & Dr. Whittier	Theory and Practice of Physic	Five.
Profs. Minot & Edes	Clinical Medicine	Four.
Prof. Bigelow	Surgery and Clinical Surgery	Two first half-year.
Prof. Cheever	Clinical Surgery	Two till April.
Dr. Porter	Surgical Anatomy and Operative Surgery	Fifteen practical exercises.
Drs. Porter & Otis	Operative Surgery	One.
Prof. Williams	Diseases of the Eye	
Prof. Williams	Clinical Ophthalmology	One till January and after March.
Prof. White	Diseases of the Skin	One.
Prof. White	Clinical Dermatology	One.
Dr. Baker	Gynaecology	Two.
Dr. Baker	Clinical Gynaecology	Two second half-year.
Dr. Davenport	Clinical Gynaecology	Two first half-year.
Dr. Greenough	Practical Diagnosis and Treatment of Syphilis	One.

COURSES OF INSTRUCTION. — CONTINUED.

Instructors.	Subjects.	Exercises per Week.
	THIRD CLASS. — CONTINUED.	
Dr. Green	Practical Diagnosis and Treatment of Diseases of the Ear	One, January till April.
Dr. Blake	Anatomy, Physiology, and Diseases of the Ear	Two for three months.
Dr. Oliver	Practical Diagnosis and Treatment of Diseases of Children	One first half-year.
Dr. Rotch	Practical Diagnosis and Treatment of Diseases of Children	One for six months.
Dr. Webber	Practical Diagnosis and Treatment of Diseases of the Nervous System	One till February.
Dr. Putnam	Practical Diagnosis and Treatment of Diseases of the Nervous System	One.
Dr. Folsom	Mental Diseases	Eight Lectures.
Dr. Draper	Forensic Medicine, with Demonstrations	Twelve Exercises.
	FOURTH CLASS.	
Dr. Draper	Clinical Medicine	One.
Dr. Garland	Clinical Medicine	One.
Dr. Mason	Clinical Medicine	One for three months.
Dr. Warren	Clinical Surgery	One, three in October.
Dr. Porter	Clinical Surgery	One after February.
Drs. Porter & W. S. Bigelow	Operative Surgery	Practical Exercises.
Dr. Bradford	Orthopedic Surgery	Two after March.
Prof. Reynolds	Obstetrics	One
Dr. W. L. Richardson	Clinical Obstetrics	Two for six months.
Dr. W. L. Richardson	Operative Obstetrics	Practical Exercises.
Prof. Williams	Clinical Ophthalmology	Two for six months.
Dr. Wadsworth	Ophthalmoscopy	One for four months.
Prof. White	Dermatology	One.
Prof. White	Clinical Dermatology	Three.
Drs Baker & Davenport	Clinical and Operative Gynaecology	Six.
Dr. Chadwick	Clinical Gynaecology	Three.
Drs. Oliver & Rotch	Diseases of Children	Three.
Drs. Webber & Putnam	Diseases of the Nervous System	Two.
Dr. Folsom	Mental Diseases	One.
Dr. Knight	Laryngology	Three for two months.
Dr. Blake	Otology	Two for three months.
Dr. Green	Otology	Two for three months.
Dr. Draper	Forensic Medicine	One.
Dr. Harris	Forensic Medicine	Demonstrations.
Dr. Greenough	Syphilis	Two.
Dr. Homans	Ovarian Tumors	Six lectures; Clinical Exercises.
Boston Cooking Sch'l	Cookery	Six Exercises.

The table on pages 90, 91 shows the amount and character of the instruction given. The results of the examinations for admission to the School are given in the following table: —

			Physics.	Latin.	English.	Elective.	Rejected.
1882.	June	Offered	21	22	21	21	3
		Conditioned	5	9	4	6	
	Sept.	Offered	23	22	22	19	0
		Conditioned	8	10	1	1	

In the following table will be found a statement of the rejections at the annual examinations in June for four years past.

JUNE EXAMINATIONS. — STATISTICS OF REJECTION.

		FIRST CLASS.						SECOND CLASS.								THIRD CLASS.											
		Anatomy.		Physiology.		General Chemistry.		Medical Chemistry.		Materia Medica.		Path. Anatomy.		Topo. Anatomy.		Theory and Practice.		Clinical Medicine.		Surgery.		Clinical Surgery.		Therapeutics.		Obstetrics.	
			Per ct.		Per ct.		Per ct.		Per ct.		Per ct.		Per ct.		Per ct.		Per ct.		Per ct.		Per ct.		Per ct.		Per ct.		Per ct.
1879	Passed	78	17	59	37	83	52	64	14	57	22	59	15			56	0	64	1	58	4	60	1	57	16	51	15
	Rejected	15		36		36		11		17		11				0		1		3		1		11		9	
	Total	88		95		69		75		74		70				56		65		61		61		68		60	
1880	Passed	77	16	81	25	52	22	46	19	70	15	62	15			58	13	53	15	65	1	59	15	56	18	56	13
	Rejected	15		27		15		11		13		11				9		10		1		11		13		9	
	Total	92		108		67		57		83		73				67		63		66		70		69		65	
1881	Passed	58	12	42	31	37	21	70	11	69	17	77	12			74	6	67	19	73	8	77	1	82	8	66	17
	Rejected	8		19		10		9		15		11				5		16		8		1		8		14	
	Total	66		61		47		79		84		88				79		83		76		78		90		80	
1882	Passed	60	14	62	17	38	20	64	9	46	24	54	16	52	5	74	10	82	5	82	2	80	3	64	7	69	17
	Rejected	10		13		10		7		15		11		3		9		5		2		3		5		15	
	Total	70		75		48		71		61		65		55		83		87		84		83		69		84	

		FOURTH CLASS.																									
		Ophthalmology.		Dermatology.		Gynaecology.		Obstetrics.		Clinical & Operative Obs.		Diseases of Children.		Diseases of Nervous System.		Mental Diseases.		Forensic Medicine.		Otology.		Laryngology.		Syphilis.		Operative Surgery.	
1881	Passed	9	0	7	22	8	11			7	22	9	0	9	0	9	0	9	0	8	11	9	0	9	0	9	0
	Rejected	0		2		1				2		0		0		0		0		1		0		0		0	
	Total	9		9		9				9		9		9		9		9		9		9		9		9	
1882	Passed	7	12	7	0	7	0	6	14	6	14	7	0	6	14	6	14	7	0	8	0	7	0	7	0	8	0
	Rejected	1		0		0		1		1		0		1		1		0		0		0		0		0	
	Total	8		7		7		7		7		7		7		7		7		8		7		7		8	

The following table shows the increasing recognition of the necessity of studying medicine where it can be taught: —

NUMBER OF TERMS SPENT AT THE SCHOOL BY GRADUATES.

	1873.	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.
Spent six terms	8	22	14 47%	25 69%	40 65%	41 85%	62 88%	39 86%	49 81%	79 91 %
Spent five terms	3	2	7	5 13%	9	4	2 2%	1 2%	6 10%	2 2%
Spent four terms	8	6	6	4 11%	8	8	3 4%	4 8%	4 6%	4 4
Spent three terms	15	5	0	2 5%	1	0	2 2%	0	1 1%	0
Spent two terms	7	3	3 10%	0	3	0	1 1%	1 2%	0	1 1%
Total graduated	41	38	30	36	61	48	70	45	60	86*

* Includes nine students of the Fourth Class.

We are now able to announce the approaching completion of the new building, which has for so many years been mentioned as one of the great wants of the School. It will probably be ready for occupancy in the spring.

CALVIN ELLIS, *Dean.*

To THE PRESIDENT OF THE UNIVERSITY: —

SIR, — I beg leave to submit my Report upon the Dental School for the year 1881–82: —

The number of students was twenty-one, — eleven in the first-year class, nine in the second-year, and one in the third-year.

The first-year students attended lectures with the Medical Students of the same year, and with them passed the same examinations. Such as cannot pass two of the three examinations of this year are not allowed to go on with the class to the next year's studies, but must go over the work of the first year again. Of such failures there were four. The studies were General Anatomy, Physiology, and General Chemistry.

The students of the second and third year also attended as a part of their course, in connection with the Medical Students, twelve lectures in Surgical Pathology, given by the Professor of Clinical Surgery.

The Professor of Operative Dentistry has lectured one hour each week on the theory and methods of his specialty, and the Clinical Instructors, each taking in turn one afternoon, have given five afternoons a week throughout the year to practical teaching in this branch of dentistry. The instruction is given in the out-patients department of the Massachusetts General Hospital, which has furnished the usual surplus of patients, so that a choice of operations and a great variety of instruction have been possible. The demonstrator, with one of the instructors, is always present to superintend the operations in this infirmary, and to give such advice and assistance as may seem to be required. Occasional clinics have also been given.

The Professor of Mechanical Dentistry has given two hours of each week to lectures and clinical instruction in the laboratory. The demonstrator in this Department has been present every morning of five days in each week for instruction. In this, as in the Operative Department, patients have been sufficiently numerous to give all students abundant and varied opportunities for practice.

Drs. Virgil C. Pond and George F. Grant, the demonstrators respectively of Operative and of Mechanical Dentistry, have worked with eminent faithfulness and success.

Dr. Charles A. Brackett, Assistant Professor in Dental Therapeutics, has given twenty-seven hours of instruction in his course. He reports that he has kept up the system of devoting the first ten minutes of each hour to a " quiz " upon the prominent points of the preceding lecture, being satisfied that facts and principles become more firmly fixed by this procedure.

Dr. Charles S. Minot has devoted three consecutive hours of each week to instruction in Oral Surgery and Pathology, including the use of the microscope and the preparation of sections. He reports a more systematic instruction in the Laboratory, a special appropriation enabling him to add several valuable specimens to the collection, and four new microscopes and other important implements to the equipment. The students showed a marked improvement over previous years, confirming the belief in the utility of these exercises, for which a more complete and definite provision seems desirable. At the end of the year, to our great regret, stress of other duties compelled Dr. Minot's resignation.

Out of seven students examined, three attained their degree.

The resignation of the Professor of Operative Dentistry, from pressure of business, was handed in at the close of the year. Dr. Shepard has been connected with the School from its origin, first as assistant professor, and, since the resignation of Dr. Moffatt, as professor, and has identified himself with the Operative Department. His loss enforces the pressing impecuniousness of the School, which, for want of money, is unable to retain experienced officers who can no longer afford to give the gratuitous service which the School demands. With the exception of the Demonstrators, every instructor in the School gives his services, and its existence depends on their unselfish devotion. Already, in the fourteen years of its existence, the School has lost from this cause two professors, one adjunct professor, three instructors who filled the places and performed the work of professors, and numerous clinical instructors. Further comment upon the pecuniary needs of the School seems unnecessary.

THOMAS H. CHANDLER, *Dean.*

To the President of the University: —

Sir: I have the honor to submit the following Report upon the Lawrence Scientific School for the academic year 1881–82: —

The number of students registered during the year was thirty-one. They were classified as follows: —

	1881–82.	1880–81.
I. Engineering	6	4
II. Chemistry	0	0
III. Natural History	6	5
IV. Mathematics	1	1
Special Courses	18	31
Total	31	41

It will be seen that there is a gain in Engineering and Natural History, and a loss in special students. Represented by percentage, Engineering gained fifty, Natural History twenty, and special courses lost about forty-two.

In my last Report I suggested that the removal, by the College, of the restriction of age, as regards unmatriculated students, would naturally diminish the number of our special students. The result has verified this anticipation. There are always a few students pursuing advanced courses of study, particularly in Natural History. Some of these, learning by experience the great opportunities for research offered by the University, and proving by their zeal and by their attainments that they know how to make use of them, are advised by their instructors to change their status from special to regular pupil. They enter with advanced standing, and take their degree in course. The graduates in the department of Natural History are largely recruited from this class. But, if we except these students, and another small class, who, unable to pass the entrance examinations, are studying to enter at a future time, it is difficult to assign a reason why, under the present relation of special students to the College, we have any special students. Their number ought to decrease from year to year.

The thirty-one students above enumerated attended the exercises of thirty-six different instructors. The whole number of courses taken, prescribed and elective, was one hundred and forty-four, an average of four and six tenths to each pupil. This, however, does not represent all the work of the School. Undergraduates of the College are now allowed to elect, either in course, or as extras, or by special petition, all the courses of the Engineering Department of the Scientific School, and all of these courses have been attended by undergraduates of the College during the past year. The Bussey Institute can send its students here to learn surveying and mechanical drawing. College students can take these two studies as extras, and by petition they are allowed to take the courses in Calculus and Mechanics, each of which, being five hours a week, counts as two college courses. The course in Mechanics is elected either by graduates who are candidates for a higher degree, or by those who intend after graduation to enter the Engineering department of the School. To the latter class, this course is especially recommended. The great difficulty with which we have to contend is to concentrate the time and attention of the student sufficiently upon his technical study. In his extended course, his specialty becomes only one item; his mental energies are frittered away over a multiplicity of subjects, and thoroughly devoted to none. If, during his undergraduate course in the College, he can cover the ground of all his preparatory studies, he will enter upon his technical course, after graduation, under the most favorable auspices.

Nothing is left to distract his attention from his technical studies: he will enter his course with all the advantages of a college training, and the best results may be expected.

Two degrees were conferred at Commencement, — one in Engineering, and one in Natural History.

H. L. EUSTIS, *Dean*.

To the President of the University: —

Sir: During the year 1881–82, seven students were instructed at the Bussey Institution. Two of them were in regular standing, while the others devoted themselves particularly to horticulture and botany. One student received the degree of Bachelor of Agricultural Science at Commencement.

Lectures, recitations, and practical exercises in Agriculture and Horticulture, and in Zoölogy, Chemistry, and Botany as applied to Agriculture, were given by Messrs. Motley, B. M. Watson, Slade, Storer, C. E. Faxon, and Ford. The course in Entomology, usually given in the spring by Mr. Burgess, was omitted this year because it happened that both the regular students, of whom it would naturally be required, had received this instruction in the previous year.

F. H. STORER, *Dean*.

To the President of the University:

Sir, — We have had the generous support of the same gentlemen named in my last Report (Messrs. Charles P. Curtis, William B. Weeden, Henry Lee, Alexander Agassiz, and Charles S. Sargent), in sustaining the publication of the University Bulletin for another year. The chief bibliographical contributions of the year, including those of previous years which have been concluded, are as follows:

1. *Historical Hydrography of the Handkerchief Shoal in the Bahamas*, by William H. Tillinghast, of the class of 1877, — a piece of thorough work, growing out of studies on the mooted question of the landfall of Columbus, and indicative of the richness of the Library's collection of maps, which in the main afforded the material of the Essay. It has since been issued as No. 14 of our *Bibliographical Contributions*.

2. *A Bibliography of Fossil Insects*, by Samuel H. Scudder, the Assistant Librarian. This was not wholly concluded during the year; but the type being set, a separate publication of it was made in advance of its completion in the Bulletin for October, 1882. As Mr. Scudder is recognized as the leading authority on this subject in the United States, and has added to his entomological studies a training in bibliographical research, the *Contribution* (No. 13 of the series), has peculiar claims for consideration.

3. *Calendar of the Arthur Lee Papers.* The enumeration of the contents of the seven volumes, as arranged by the late Mr. J. W. Harris, has been printed in full; but a package of unassorted papers sufficient to make an eighth volume has been found, and the publication of the *Calendar* will accordingly be resumed in the coming year.

4. *A List of the most Useful Reference Books*, by the Librarian. This series has been begun, the initial section covering in part an enumeration of chronological and allied Dictionaries and Manuals.

5. *Classified Index to the Maps in Petermann's Geographische Mittheilungen*, 1855–1881, by Richard Bliss, jr., of the United States Geological Survey. This useful key has been begun, and will add considerably to the value of the journal in question.

6. *List of American Authors in Geology and Palæontology*, by Professor J. D. Whitney of this University. The first half of this convenient guide appeared in the number for April, 1882, and the conclusion comes in that for October; meanwhile, the whole has been issued as *Bibliographical Contribution* No. 15.

The Librarian emeritus has charged himself with the preparation of the quarterly necrology of the University, which was begun in the April number. I must add that, in making up the University Notes of each number, I have found it much more difficult to secure contributions from the literary than from the scientific portion of the University staff.

I regret to say that ill-health has interfered with the continuous labors of Mr. George F. Arnold, the head of the shelf department, and has finally resulted in his withdrawal from the service. His careful, intelligent, and eminently practical methods in the classification will stand, however, for his successor as a fitting suggestion of the system which is yet to be applied to the science classifications of the library. The following report of the year's work done by Mr. Arnold under such disadvantageous conditions, has been prepared by his colleague, Mr. W. C. Lane, the present first assistant of the Catalogue department, with the aid of Mr. Frank Carney, Mr. Arnold's chief assistant.

The number of volumes now in place in the new stack is 70,042; the number added to the permanent classification during the year was as follows: —

Classical Philology (last 3 rows)	1,073
Cyclopædias	723
Added to classes previously arranged	2,276
Total	4,072

The rows of Classical Philology as arranged include the subjects Mythology, Inscriptions, Miscellany, Bibliography, and Literary History, Greek and Roman Arts and Sciences, Prosody, and Greek and Roman Philosophy. The Greek and Latin authors follow immediately, and have been collected on the shelves they are to occupy; the books are not yet perfectly arranged, but, as they will remain in their present condition for some time, they have been given temporary numbers, and the cards in the catalogue marked to correspond.

Besides these, about 2,000 volumes of newspapers have been brought together and partly placed in order.

These newspapers have been placed in the new room for newspapers and duplicates, which has been made by remodelling the basement of the original Gore Hall, as explained in last year's Report. The summer just passed did not test severely the freedom of the new room from damp, because of the continued dryness of the weather; but there is little ground for apprehension that less favorable seasons will cause any difficulty.

The limit of the work upon the classification of the collections has now been practically reached, and little can be accomplished except in the way of temporary expedients, till the old part of the building is remodelled, and space is prepared for the classification of the scientific portions of the Library.

The accessions to the University Library for the year, and the present extent of the various departments, are as follows: —

Departments.	Volumes added.	Present extent in	
		Volumes.	Pamphlets.
Gore Hall (College Library) .	6,848	202,021	198,665
Law School	994	20,603	2,817
Scientific School	30	2,376	200
Divinity School	98	16,350	1,672
Medical School	39	2,048	....
Museum of Zoölogy	698	15,532	9,461
Astronomical Observatory . .	164	2,917	5,498
Botanic Garden	50	4,187	2,718
Bussey Institution	217	2,417	854
Peabody Museum	54	615	547
Totals	9,192	269,066	222,427

Of the accessions to the Gore Hall collection, there were added by gift 1,782 volumes and 3,861 pamphlets; and such accessions also include 41 volumes transferred from the Library of the Divinity School.

The Curator of the Peabody Museum adds to his return the following statement: "The Library has been catalogued and all publications not relating to Anthropology have been eliminated. The analytical work and classification is now in progress. Of the photographs and engravings no account has yet been made."

The figures of the Botanic Garden library are from a new count.

The following table shows the use of books at Gore Hall, as compared with the last three years: —

	1878–79.	1879–80.	1880–81.	1881–82.
1. Books lent out	41,296	41,986	45,481	48,194
2. Used in the building	10,921	7,812	11,724	10,498
3. Overnight use of reserved books	7,519	10,506	11,872	12,891
Total (excluding No. 3, which is included in No. 1)	52,217	49,798	57,205	58,692
Cards giving to students temporary admission to the shelves	....	60	85	200
Times of use	....	840	870	2,542
Officers of instruction reserving books . . .	....	35	38	41
Number of books reserved	....	3,330	3,418	4,251

The 200 students using admission cards have been in these departments: History, 49; Science, 26; Art (including music), 22: Literature, 36; Greek and Latin authors, 49; Philosophy, 6; Theology, 4; and Political Economy, 8.

During 36 Sundays (till the long vacation came) 2,067 persons availed themselves of the opportunity of using the Library on those days, which is an average of 57 each Sunday, being an increase of ten over last year. The hours were from one to five o'clock. The highest number on any one day was 91 against 64 last year.

The work of the catalogue department is indicated by the following table, which has been furnished by Mr. Lane: —

	1878-79.	1879-80.	1880-81.	1881-82.
1. Cards put into the Public Catalogue . . .	36,390	35,315	41,215	34,168
2. Cards prepared	20,595	24,887	25,705	18,235
3. Volumes received	....	....	7,873	6,848
4. Pamphlets received	....	....	....	4,469

The official catalogue (authors only) was begun in 1834, and still contains a large number of titles, which have not been re-catalogued for the public catalogue (authors and subjects), which was begun in 1860. The volumes which remain to be so treated are mostly those presenting difficulties, the easier sort having been earliest attended to. The number (535) whose cards have been added to the public catalogue is only a third of those added last year, since, with a diminished staff, work has been stopped on them.

The cataloguing of pamphlets (1,363) has gone on faster than revision could be applied, and a body of 500 is waiting for this final work. This also has been the result of insufficient help.

The pressure is also increased from the departmental cataloguing now done in Gore Hall, which covered 1,354 volumes and pamphlets for the year, beside the record slips made of books bought for the Greek and English departments, and single newspapers added to old files. By a computation 3,086 volumes and 5,420 pamphlets of recent accessions were uncatalogued on the 30th of September.

These figures indicate the urgent need of increasing the Library force, which by resignation and removal has been largely diminished during the year. The resignation of Miss Annie E. Hutchins, for many years an efficient member of the staff, has thrown the chief burden of the catalogue revision upon Mr. W. C. Lane, who was transferred from the head of the ordering department. His former place was filled at the same time by the appointment of Mr. W. H. Tillinghast.

The work of revising the public catalogue and adapting it better to the use of the frequenters of the Library, which has been the special charge of Mr. Scudder, the Assistant Librarian, is so well advanced, that we are nearly ready for the notation of classes. Mr. Scudder's Report is as follows:

"The revision of the subject catalogue in the interest of the numerical notation, which we are attempting to engraft upon it, has not proved an easy or a rapid task, as might indeed be supposed from the mere fact that it did not form part of the original purpose of the catalogue. The success, however, of such an attempt seems too clearly an advantage to grudge the labor attending it. As it renders the catalogue inflexible by fixing almost irrevocably even the details of its arrangement, no pains should be spared to make in the first place the whole as perfect as possible. The revision of the old primary subjects has been completed and their number reduced one third, with an actual change which would scarcely be noticed even by one constantly consulting the catalogue. The changes made since the last Report have involved alterations in the headings of about 1,500 cards, and the completion of the work has made the catalogue more consistent, more convenient, and a more efficient guide to the Library.

"On the completion of this revision of the main subjects, a collection was made of about five thousand additional words or compounds, which might be required for headings either in principal or subordinate places. These were sought in various lists of such terms, and particularly in those accompanying recent schemes for the classification of books, in Poole's new *Index to Periodical Literature* (the advance sheets of which were accessible), in a MS. list in the Boston Public Library, and in the 'branches' and 'sections' of our own subject catalogue. These headings have been entered on separate slips and arranged alphabetically, and will form, when completed, a subject-reference catalogue of all headings and subdivisions, both present and prospective. When revised, the cross references fully entered, and the notation added, it will form an invaluable adjunct to the catalogue department, and serve as the basis of the complete index to our subject catalogue, which has been contemplated from its formation, and which it is hoped one day to print, to enable the tyro to consult the catalogue as readily as the adept.

"A preliminary revision is already advanced and will probably be completed at an early day. The notation will then be determined on for all the main headings, and before the end of the calendar year it is hoped to apply it to the furthest details of some one subject, to be followed by others as rapidly as is consistent with accurate revision."

The Library still continues to have charge of the issue of the weekly *Calendar* of the University.

JUSTIN WINSOR, *Librarian.*

To the President of Harvard University: —

Sir: I respectfully submit the following Report on the Botanic Garden for the Academic year 1881–82.

During the past year the Garden has suffered much from the protracted dryness of the season, but the loss has been kept within comparatively narrow limits by the unwearied care of the head-gardener, Mr. William Falconer. The soil of the whole Garden is a stiff clay which has never been systematically underdrained; hence the ground, which is thoroughly drenched by the spring rains, becomes "baked" and very hard to work during even a short period of drought. The amount of water purchased by us throughout the year, for out-door plants as well as for those in the greenhouses, is a burden of expense which ought not to be borne by our funds. The inhabitants of Cambridge are admitted to our grounds and conservatories at all times, and the number of visitors from this vicinity is large and constantly increasing. We encourage their coming, and endeavor to make the Garden not only instructive to those who are interested in Botany, but attractive to all. It is therefore, for all practical purposes, a public park, but with this difference, — the city of Cambridge, in which it is situated, is not responsible for its care. It appears to be a fair request to make of our city government that they remit the charge for the water which we use in the Garden. It is the purpose of the Director to bring the matter to the attention of the proper authorities, feeling sure that a request so reasonable in its character will not be refused.

The Garden is annually cultivating a larger number of plants for the illustration of Economic Botany. It is believed that a still fuller exhibition of the plants, both indigenous and exotic, from which the textile fibres, dyes, tanning materials, drugs, and foods are produced, cannot fail to be of interest and profit to all classes of students in our University.

It is a matter of regret to the Director that the limited size of the lecture-room at the Botanic Garden makes it unadvisable to offer to the students a short course of general lectures on the principal features and phenomena of vegetation. Many undergraduates and professional students, who cannot spare the time to pursue a special course in Botany, might be glad to be placed in possession of the more general facts and principles of the science. But, since the lecture-hall at the Garden accommodates only eighty listeners, such a general course upon our grounds is impracticable. The remoteness of the Garden from the College yard would render it a difficult task to transfer to one of the halls there the living specimens required for illustration. Failing this, it has been thought best to devote a part of the Garden to the exhibition of specimens which display the more striking characters of the structure of plants, and to increase our number of plants useful in the arts.

The recent acquisition of a full suite of specimens of the drugs of the United States Pharmacopœia, and of a large proportion of those which are officinal in other countries, suggests the desirability of offering to medical students a short course on medicinal plants. Two of the existing electives in Botany are taken by the undergraduates intending to enter the Medical School. These electives can now be more fully illustrated than ever before.

No material changes have been made within the year, in any of the greenhouses. They continue to fall out of repair, and the question of their partial or complete reconstruction cannot be much longer deferred with safety. The Director has been unwilling to undertake any rebuilding until the funds for the support of the Garden are more ample. Although by the exercise of great economy the running expenses of the past year have been kept within the assured income, it has been impossible to engage in some much needed improvements without encroaching upon the capital. All rebuilding must therefore wait the result of renewed efforts on the part of the Overseers' Committee on the Botanic Garden.

In 1864, when the Botanic Garden was in extreme need, John Amory Lowell, Esq., at that time a member of the Corporation, gave anonymously the sum of five hundred dollars for immediate use. In the year following he gave one thousand dollars for the same purpose, and a like sum annually thereafter until 1876. In 1879, Mr. Lowell subscribed one thousand dollars to the new fund, for the support of the garden, but subsequently authorized the Director to transfer the amount to the income for the year. The same amount was given the next year. In January, 1882, the following extract from Mr. Lowell's will was received by the Corporation: —

"I give and bequeath to the President and Fellows of Harvard College the sum of twenty thousand dollars to be added to the Massachusetts Fund for the Botanic Garden, on condition that the same shall be named in honor of my Grandfather, Judge Lowell, who by his exertions mainly procured the original subscriptions, the Lowell Fund for a Botanic Garden."

On the 23d of January, the Corporation voted "that the Massachusetts Fund for the Botanic Garden be hereafter named the Lowell Fund for a Botanic Garden, in honor of the late Judge Lowell, who mainly procured the original subscriptions, and in accordance with a provision made by the subscribers to the Fund for a change of its name under certain circumstances."

Thus by Mr. Lowell's bequest, there is secured to the Botanic Garden an amount equal to that which it had received annually during a long period of years. The new name of the fund may well be regarded as commemorative of two of the chief benefactors of the Garden. Attention should also be called to the fact that the Herbarium was, in 1864, the recipient of the costly botanical library of Mr. Lowell, and that it has proved to be a very valuable portion of the Herbarium Library.

It gives the Director much pleasure to report that he was authorized by two members of the Garden Committee to purchase in Europe apparatus for our Botanical Laboratory. For about twenty-five hundred dollars he has been able to procure the instruments and other appliances which are absolutely required for certain lines of demonstration and research. In the selection he was greatly aided by the advice and assistance of the professors in many of the German Universities. But it is needless to say that he was largely governed in this selection by a realizing sense of the scanty space in which the apparatus was to be stored and used.

It is proper to state, further, that means were also provided by another member of the Committee for the careful study of the workings of the Botanical Gardens and Institutes of Germany. The results thus obtained will be presented to the Committee on the Garden. By a minute investigation of the methods employed in the gardens belonging to the Universities many suggestions were obtained which may lead to important changes in the scope of our Garden, by which its efficiency as an educational appliance of the University can be increased, and, at the same time, it can be made more generally useful to the public from which it has already received a portion of its funds and to which it may confidently look for more.

From the memoranda of the Curator of the Herbarium, it appears that 8760 plants have been added during the year. The accessions to the Botanical Library of the Herbarium have been as numerous as in the previous year.

During the absence of the Director, the general supervision of the Garden was placed in the hands of Professor Gray and Mr. Sereno Watson. By their care, and by the energy of the head-gardener, the Garden has continued to improve in many directions. That these improvements may be carried on still further, and that others quite as important may be undertaken, our funds must be increased. It is the intention of the Committee on the Garden to resume at an early day their solicitation for this purpose.

GEORGE LINCOLN GOODALE, *Director.*

TO THE PRESIDENT OF THE UNIVERSITY: —

SIR, — As Director of the Chemical Laboratory, I have the honor to present the following Report for the academic year 1881–82: —

During the past year the Director was absent in Europe, and the courses of instruction in the Laboratory were distributed as follows: The course of elementary lectures on general chemistry to the Freshman class was delivered by Professor Jackson in place of the Director; the course on descriptive chemistry (Chemistry I. of the elective courses of the College) was as usual conducted by Professor Jackson, with the assistance of Dr. Mabery during the practical exercises in the Laboratory; the course on Mineralogy (Chemistry II.), usually in charge of the Director, was given wholly by Dr. Melville; the course on qualitative analysis (Chemistry III.) was given as heretofore by Assistant Professor Hill, with the assistance of Dr. Mabery in the laboratory work; the course on quantitative analysis (Chemistry IV.), usually in charge of the Director, was given wholly by Dr. L. P. Kinnicutt; the course on organic chemistry (Chemistry V.) was given as in past years by Professor Hill; finally, the advanced students (Chemistry VI. and IX.) worked under the special direction of Professor Jackson or Hill. The several laboratories were under the constant oversight of the assistants, — the qualitative laboratory of Dr. Mabery, the quantitative laboratory of Dr. Kinnicutt, the organic laboratory of Mr. Sanger, and the mineralogical laboratory of Dr. Melville. The total number of students occupying desks at the Laboratory was two hundred and thirty-three, and the total number receiving instruction over four hundred and fifty.

The past year was marked by great activity in the scientific work of the Laboratory. Professor Jackson, with Mr. A. E. Menke, published three papers, — two on curcumin, the yellow coloring matter of turmeric; and one on turmerol, the oil which gives its taste and odor to the same well-known vegetable dyestuff. He proved that vanillin, the flavoring principle of vanilla, could be made from curcumin, and that the latter substance was a diatomic monobasic acid. Besides studying the potassium salts of curcumin, he investigated also its bromine derivatives, as well as its dihydride. Turmerol was proved to be an alcohol derived from a very complex hydrocarbon, and when oxidized by potassic permanganate it was found to yield terephthalic acid. The results of previous observers in regard to these two substances were corrected, and the formulae of the compounds for the first time established; that of curcumin being $C_{14}H_{14}O_4$, and that of turmerol $C_{20}H_{29}OH$.

Researches were undertaken by Professor Hill to elucidate the constitution of mucobromic acid, more especially to determine the position of the two bromine atoms not only in the molecules of this acid, but also in those of the directly related dibromacrylic and dibrommaleic acids, and in this connection dibromacrylic acid itself was submitted to more careful study than had hitherto been given to this compound. It having been found that potassic nitrite acts with remarkable facility upon mucobromic acid and its ethers, the products thus resulting were partially studied, and a preliminary account of this investigation was published in the "Berichte" of the Berlin Chemical Society. All this work was a continuation of previous work on furfurol and some of its derivatives. In connection with these investigations, the following papers were published by Professor Hill: —

1. On Dibromacrylic Acid.
2. On the Relation between Dibromacrylic Acid and Tribrompropionic Acids, in connection with Mr. C. W. Andrews.
3. On certain Tetrasubstituted Propionic Acids, in connection with Dr. C. F. Mabery.
4. On the Constitution of the Substituted Acrylic and Propionic Acids.
5. "Ueber die Einwirkung von Salpetrigesaurem Kali auf Mucobromsäure," in connection with Mr. C. R. Sanger.

A large number of crystallographic determinations and measurements were made by Dr. W. H. Melville, and the results were published in the following papers: —

1. On the Crystalline Form of Cryolite.
2. On the Crystalline Form of White Tourmaline.
3. On the Crystalline Form of Iodide of Arsenic.
4. On the Crystalline Form of a Dichloracrylic Acid.
5. On the Crystalline Form of Tribromacrylic Acid.
6. On the Crystalline Form of Dibromiodacrylic Acid.
7. On the Crystalline Form of Chlorbromiodacrylic Acid.
8. On the Crystalline Form of Tetrabrompropionic Acid.
9. On the Crystalline Form of α Dichlordibrompropionic Acid.
10. On the Crystalline Form of β Dichlordibrompropionic Acid.

The first five of these papers were published separately, the last five in connection with papers before mentioned in which the several substances were otherwise described.

Two papers were published by Dr. L. P. Kinnicutt.

1. An indirect Determination of Chlorine and Bromine by Electrolysis.
2. Formation of Phenylglyceric Acid from Cinnamic Acid Dibromide.

The tenth summer course of instruction in chemistry, given in 1882 under the direction of Dr. Mabery, was attended by thirty-three persons, eighteen of whom were teachers in other colleges or in the secondary schools. Both elementary and advanced instruction was given, and several original investigations were undertaken, two of which were completed.

The action of bromine on the dibromacrylic acid, first described by Fittig and Petri, was studied by Professor Franklin C. Robinson. The composition of the resulting tetrabrompropionic acid was determined by analyses, and some of its more important salts were made and analyzed. Its decomposition products also were submitted to careful study.

An examination was made of the decomposition products of chlortribrompropionic acid. Since chlordibromethylen, the volatile product of this decomposition, proved to be identical with that obtained by Wallack from β-dichloracrylic acid, the chlorbromacrylic acid from which chlortribrompropionic was made would naturally have an analogous constitution. In February, 1882, the following papers were published in the Proceedings of the American Academy upon results which were obtained in the summer of 1881: —

1. On Diiodbromacrylic and Chlorbromiodacrylic Acids. By Charles F. Mabery and Rachel Lloyd.
2. Preliminary Notice on Orthoiodbenzylbromide and its Derivatives. By Charles F. Mabery and Franklin C. Robinson.
3. On Chlortribrompropionic Acid. By Charles F. Mabery and H. C. Weber.

Of the above-mentioned twenty-three papers, published under the general title of "Contributions from the Chemical Laboratory of Harvard College," each one contains a positive addition to knowledge.

During his journey in Europe the Director has added very materially to the means both of instruction and of research. A dynamo-electrical machine with an adequate motor has been placed in the basement of the Laboratory. The apparatus required for investigations in the new branch of the science, called thermochemistry, has been procured. Several hundred valuable specimens have been added to the mineral cabinet, and placed on exhibition in the cases; and a favorable opportunity enabled the Director to procure at small cost several thousand characteristic mineral specimens for the use of students. It has been very difficult hitherto to procure suitable specimens in sufficient number and variety for the large class in mineralogy, and, this want having been thus supplied, the laboratory teaching in this subject will be made more effective.

JOSIAH P. COOKE, *Director.*

TO THE PRESIDENT OF THE UNIVERSITY:

SIR, — The progress made in the reduction of the past observations has been the distinguishing feature of the last year. The micrometric observations of the large telescope, to the beginning of 1882, have been published, and the volume has been distributed. A large part of it is occupied with the work of my predecessor, the late Professor Winlock, upon double stars, nebulæ, and other objects, including spectroscopic results. The reductions of the zone observations made with the meridian circle from 1871 to 1879 are now approaching completion. The meteorological observations from 1840 to 1880 have been brought together and are nearly ready for publication. The most important piece of photometric work as yet undertaken here has been completed, and the catalogue giving the results of the measures of four thousand stars is now in the hands of the printer. It thus appears that if the present rate of work is maintained, it will not be long before the accumulated observations of the past are reduced and printed, and we may anticipate a publication of our future observations without a delay greater than is needed for their reduction.

The work of the various instruments will now be considered in detail.

EAST EQUATORIAL.

Eclipses of Jupiter's Satellites. — The observations of these eclipses photometrically, begun in 1878, have been continued during the past year. One hundred and eighty-five eclipses have been observed, thirty-two since Nov. 1, 1881.

Objects having singular Spectra. — The search for these objects in previous years has been mainly in regions selected without special system. The heavens have now been divided into sections of equal area, and a rectangle of 5° by 10° in the centre of each has been selected for examination. The twelve regions having centres at declination + 15° and right ascension 1^h, 3^h, 5^h, etc., have all been swept over in this way. Of the twelve corresponding regions having a declination of — 15° six have so far been examined. From this systematic search, we may learn in what portion of the heavens we may expect to find objects of interest, and thus justify a more extended examination. The absence of such objects in other regions will also show that a further search in their vicinity is unadvisable. Several minute planetary nebulæ have been found near the Milky Way, but none at a distance from it. A special search was therefore made last summer in the Milky Way from — 30° to + 20°. This resulted in the discovery of seven new planetary nebulæ. Most of these objects, although moderately bright, are so minute that they could not be distinguished from stars by an ordinary eyepiece. One of them has hitherto been mistaken for a star, and is given in the catalogues as DM. + 1° 3979.

Satellites of Mars. — At the last opposition of Mars the satellites were looked for and were repeatedly seen by Mr. Wendell and myself between December 16 and February 24. It thus seems probable that these objects may be seen with our telescope at any opposition of the planet. The observations made of them here on this occasion were entirely photometric. The results were in general confirmatory of those obtained at the oppositions of 1877 and 1879, but the difference between the brightness of Deimos when preceding and when following Mars, which had been formerly noticed, was not now apparent.

Lunar Objects.—The photometric determination, for the Selenographical Society, of the brightness of various points on the Moon, mentioned in the last report, was completed and the results communicated to the Society. They appear in the Selenographical Journal, V. 57. It appeared from this investigation that the scale of brightness in common use by observers of the Moon might be very closely expressed in terms of stellar magnitudes, each degree of the scale answering to the ratio of light equivalent to six tenths of a magnitude.

Double Stars. — As a part of the bibliography noted below, a list has been prepared of the double stars, the variability of whose components has been suspected. The photometer employed in the observations discussed in Volume XI. Part I., is especially suited to observing such objects. The usual methods of detecting variability fail when applied to the double stars. One of the most striking instances in this list is the star *θ Serpentis*, one component of which has been thought to be variable by Dr. Gould. According to our observations on three evenings in 1878, the respective differences in magnitude of its components were 0.5, 0.5, and 1.4. It has been repeatedly measured during the past year with the results 0.4, 0.4, 0.4, 0.5, 0.4, on different evenings. In general each of these numbers is the mean of sixteen settings.

If really variable, the star probably belongs to the Algol class, and this conclusion seems unavoidable unless the wrong star was observed in the last measures in 1878. The measures show the great precision attainable with this form of photometer.

Wedge Photometer. — A modification has been made of Professor Pritchard's wedge photometer which seems to render it especially suitable to the measure of the light of faint stars in zones. The wedge is placed so that the diurnal motion of the stars carries them from its thin to its thick portion, and the time of disappearance is noted. A bar in the unobstructed part of the field serves to determine the position of each star. From 1852 to 1860 the measurement of the positions of the stars from the equator to one degree north formed an important part of the work of the large telescope. The stars in the northern 10′ of this zone have been arranged in catalogue form, and the necessary preliminary observations have been made by Mr. Searle. Besides determining the light of these objects it is hoped that some interesting cases of proper motion may be detected.

Sawyer's Variable. — A careful study of this interesting star by Mr. Chandler proved that it belonged to the Algol class, and also that its period was only about twenty hours. This gives it the shortest period of any variable star as yet discovered, and only a little more than one third of the period of any other variable of the same class. The variation of light is about three fourths of a magnitude. A long series of observations of the light curve and of successive minima has been made by Mr. Chandler, and gives the period $20^h\ 7^m\ 41^s.6$, with a probable error of $1^s.3$.

The comparison stars were measured on ten nights with the meridian photometer, and furnished a means of reducing these observations to absolute light ratios. The light curve has also been determined photometrically by Mr. Wendell and myself. Observations were made on eighteen nights and give a very precise measure of the changes of light.

Comets. — The telegraphic system for the speedy transmission of various data respecting comets, which was mentioned in the last report, has been maintained and extended. The first observation of a new comet which is obtained at this Observatory is now telegraphed to Europe in advance of the elements, and is often found useful by European computers. It has happened in two cases, those of the comets discovered by Messrs. Wells and Barnard, that the receipt of the position obtained here was the first intimation abroad of the discovery. This led in the case of the Wells comet to the supposition that the discovery had been made at this Observatory, and to guard against similar errors in future, the despatches are now made fuller, giving the facts of discovery as well as the positions. Arrangements have also been made with Mr. Swift, director of the Warner Observatory at Rochester, in accordance with which he forwards information received by him of new discoveries, either for immediate transmission to Europe, or for a previous investigation here.

The four comets, discovered respectively by Swift in 1881, by Wells and Barnard in 1882, and by various southern observers (the great comet of the year), will show the working of this system. In each case, an observation was obtained at this Observatory on the night following the receipt of intelligence of the discovery, and an orbit was computed, telegraphed to Europe, and published by the Science Observer in this country, during the next four days. In two cases, the accurate position obtained here, and telegraphed in advance of the orbit, was published abroad on the day following that on which the news of the discovery reached us. The orbit of Swift's comet sent from this Observatory first announced its discovery to European astronomers, as likewise happened in two cases already mentioned with regard to the first observation obtained here. These first observations were extensively used in the computations made in Europe. Cloudy weather prevented sufficient data for an orbit of the great comet from being secured here in the first few days of its appearance; but, on receipt by telegraph from Europe of one more position, the orbit was computed and telegraphed back within seven hours.

MERIDIAN CIRCLE.

After continuous observations extending over twelve years, Professor Rogers has found it necessary to take a prolonged rest from night work. The interrupted series will be resumed in February, 1883. Meanwhile the instrument has been used in determining the local time. Its constants, including the collimation, the level, the flexure, the reading of the long collimator, and the index error of the circle, have been determined every week.

Excellent progress has been made with the reduction of the observations from 1870 to 1879. These observations will occupy about twelve hundred printed pages, and will fill three volumes of the Annals. The subject will probably be divided according to the following plan. The first volume will contain an introduction giving a description of the processes of observation and of reduction, and a discussion in detail of the instrumental constants for the entire period. The tabular values of these constants will be given for each date. The greater portion of this volume will be devoted to a table which will give the mean times of transit, the circle readings, the constants needed in the reduction, and the resulting right ascension and declination of each of the fundamental stars observed. The second volume will contain all the zone observations in journal form. The quantities used in the reduction of the zone stars will also be given in this volume. The third volume will contain the observations of the secondary polar stars observed during the years 1872–73, the observations of a list of stars made at the request of the United States Coast Survey in 1878, and all the miscellaneous observations made previous to 1879. The second part of this volume will contain the final catalogues of the primary stars, of the secondary stars, and of the zone stars reduced to 1875.0

The introduction to the first of these volumes, occupying one hundred and fifty pages of manuscript, is completed and is ready for publication. The data for the body of the work are also complete except the introduction of the newly determined instrumental constants depending directly upon the system given in Publication XIV. of the Astronomische Gesellschaft. The preparation of the copy for publication has recently been commenced.

Of the second volume, the reduction of the zone observations to the beginning of the year of observation has been completed, and the copy containing the original data has been prepared for the printer. It occupies about six hundred pages of manuscript. The reduction of the Durchmusterung places from 1855 to 1875 is nearly completed. A large part of the reductions of the zone observations are to be examined either by cross checks or by recomputation. All doubtful observations are to be investigated, and the positions are to be reduced from the beginning of the year of observation to 1875.0 by means of manuscript tables.

The only portion of the third volume which is ready for publication is that containing the observations of the Coast Survey Catalogue. This occupies one hundred pages of manuscript. The reduction of the Polar Catalogue with the newly determined instrumental constants, and the formation of the final catalogues, still remains to be made.

MERIDIAN PHOTOMETER.

The measurement of the light of the stars visible to the unaided eye was completed last summer. Over ninety thousand measures were made on about four thousand stars, most of them being observed on from three to six nights. The more important stars were measured more frequently. Four settings were made every evening on each object. A series of estimates by the unaided eye have also been made by three observers for purposes of comparison. The entire work will involve the discussion of several problems of general interest in connection with the light of the stars. Among these may be mentioned the atmospheric absorption. A discussion of about fifteen thousand observations available for this investigation shows that we may assume that the absorption at any altitude, exceeding 15°, equals in stellar magnitudes one quarter of the secant of the zenith distance. This agrees very nearly with the empirical law deduced by Seidel, especially if we apply a correction for the low barometric pressure due to his great elevation. The average deviation of the two laws does not exceed a thirtieth of a magnitude. A special series of eye estimates serves to extend this law to the horizon.

The constancy of the Pole Star is established by the same observations with the photometer. A series of eye estimates was also made to compare the light of the Pole Star with that of other stars of nearly equal brightness near it, and shows that the relative position of two stars to be compared has an important influence in their apparent brightness. After applying a proper correction, the average deviation of the results is reduced to six one hundredths of a magnitude. An extended comparison of the scale of magnitudes employed by previous observers has been made. A reduction of the observations of Sir William Herschel has been effected, and has led to interesting results. His observations of the light of the stars are not only far superior to any similar work preceding it, but are more precise than most of the subsequent determinations. Their neglect hitherto is partly due to the want of a suitable system of magnitudes by which they might be reduced. This want is supplied by the photometric measures now under consideration. There seems also to have been an impression that the intervals employed by Herschel were so large as to render the observations uncertain. Our reduction shows that the intervals he designated as a period, comma, and dash, do not exceed one, two, and four tenths of a magnitude; and that the average deviation of a single comparison of two stars, expressed in magnitudes, is only 0.25. As this includes the error of our measurements of each star, the difference of each as seen by the eye from its true brightness, and the variation each has undergone during the past century, it is obvious that the errors of Herschel's observations must be very small. We have thus an accurate measure of the brightness of a large part of the lucid stars a hundred years ago. This will be of the utmost value in determining any changes of long period that may take place in their light.

The large meridian photometer announced in my last report has been completed, and work with it begun. Sheets have been written for about ten thousand stars to be observed with this instrument. Over seven thousand measures have so far been made, mainly of the stars in the over-lapping portions of the zones assigned to different observatories engaged in the revision of the Durchmusterung. The measurement of the stars adopted as standards for the Uranometria Argentina is also in progress.

PUBLICATIONS.

Volume XIII. Part I., of the Observatory Annals, was published and distributed in October, 1882. It contains the previously unpublished results of micrometric observations made here to the end of 1881, mentioned in detail in the report of last year.

The printing of Volume XIV. is now in progress. This volume is to contain the results obtained with the first meridian photometer. The part of the work first printed consists of a catalogue of stars visible to the naked eye in this latitude, with their magnitudes as determined by the photometer, by the recent estimates of the northern stars likewise made here, and by various older series of observations.

The papers mentioned below have appeared during the year as communications from the officers of the Observatory. A few are added to the list which were overlooked in the preparation of the last report.

Report of the Committee on Standards of Stellar Magnitude. By Edward C. Pickering and others. Proc. Am. Assoc. for Advancement of Science, August, 1881; xxx. 1.

On a Convenient Method of expressing micrometrically the Relation between English and Metric Units of Length on the same Scale. By W. A. Rogers and G. F. Ballou. Id. xxx. 116.

On a Method of reducing Different Catalogues of Stars to a Homogeneous System. By W. A. Rogers. Id. xxxi. 11.

On the Performance of a New Form of Level invented by Mr. John Clark of the United States Coast Survey. By W. A. Rogers. Id. xxxi. 14.

New Variable Star in Puppis. By Edward C. Pickering. Astronomische Nachrichten, c. 13.

Elements of Comet *b* 1881. By S. C. Chandler, Jr. Id. c. 121.

Elements and Ephemeris of Comet *e* 1881. By S. C. Chandler, Jr. Id. c. 319.

On the Telegraphic Transmission of Astronomical Data. By S. C. Chandler, Jr., and J. Ritchie, Jr. Science Observer, August, 1881, iii. 65.

Comet *b* 1881. By O. C. Wendell. Id. iii. 81.

Report on the Progress of the Zone Observations. By Edward C. Pickering. Vierteljahrsschrift der Astronomischen Gesellschaft, 1881, xvi. 317.

Letter to the Astronomische Gesellschaft on the Science Observer Code. By S. C. Chandler, Jr., and J. Ritchie, Jr. Id. xvi. 344.

Order of Brightness of Stars. By Edward C. Pickering. English Mechanic and World of Science, November, 1881, xxxiv. 278.

Remarkable Star Spectrum; New Planetary Nebula. By Edward C. Pickering. Science, December, 1881, ii. 581. Copernicus, December, 1881, i. 242.

Geodetic Formulæ. [Second Paper.] By J. Rayner Edmands. Appalachia, December, 1881, ii. 351.

Elliptic Elements of Comet *f* 1881 — Denning. By S. C. Chandler, Jr. Science Observer, December, 1881; iii. 91.

Reply to Inquiries regarding Time Balls. By Edward C. Pickering. Professional Papers of the Signal Service, No. 5, p. 24.

Observations and Elements of Barnard's Comet, 1881, VI. By S. C. Chandler, Jr. Astronomische Nachrichten, ci. 57.

Stars with Peculiar Spectra, discovered at the Astronomical Observatory of Harvard College. By Edward C. Pickering. Id. ci. 73.

On the Periodicity of Comet (Denning) 1881, V. By S. C. Chandler, Jr. Id. ci. 93.

Observations of Comets, 1881, V., and 1881, VIII. By O. C. Wendell. Id. ci. 231.

Observations of Comets, 1880, IV., and 1881, II. By O. C. Wendell. Id. ci. 299.

The Pleiades. By Edward C. Pickering. Astronomical Register, February, 1882, xx. 40.

Variable Stars. By Edward C. Pickering. English Mechanic and World of Science, February, 1882, xxxiv. 542.

On the Variability of DM. + 23° 1599. By S. C. Chandler, Jr. Astronomische Nachrichten, cii. 139.

Photometric Observations of Planets and of Jupiter's Satellite, III., made at the Harvard College Observatory. By Edward C. Pickering. Id. cii. 151.

Photometric Observations of the Satellites of Mars, 1881–82. [E. C. Pickering and O. C. Wendell, observers.] By Edward C. Pickering. Id. cii. 193.

Erratum in Observations of Comet Wells, 1882. By Edward C. Pickering. Id. cii. 223.

On Certain Zodiacal Phenomena. By Arthur Searle. Id. cii. 263.

On Sawyer's Variable, DM. + 1° 3408. By S. C. Chandler, Jr. Id. cii. 371.

On a New Variable Star in the Constellation Cetus. By S. C. Chandler, Jr. Science Observer, March, 1882; iii. 105.

The Mountains between Saco and Swift Rivers. [With map.] By J. Rayner Edmands. Appalachia, June, 1882; iii. 57.

The Meridian Photometer. By Edward C. Pickering. Monthly Notices of the R. Astr. Society, June, 1882, xlii. 365.

Photometric Comparisons of Lunar Objects. By Edward C. Pickering. Selenographical Journal, July–August, 1882; v. 53, 57.

On Certain Zodiacal Phenomena. By Arthur Searle. Science Observer, July, 1882, iv. 4.

On Sawyer's Variable, DM. + 1° 3408. By S. C. Chandler, Jr. Id. iv. 11.

Photometric Measurements of Sawyer's Variable (DM. + 1° 3408) and its Comparison Stars. By Edward C. Pickering. Astronomische Nachrichten, ciii. 61.

New Planetary Nebulæ. By Edward C. Pickering. Id. ciii. 95, 165.

Observations of Comets, 1881, III., IV., VI. By O. C. Wendell. Id. ciii. 145.

Small Planetary Nebulæ, discovered at the Harvard College Observatory. By Edward C. Pickering. The Observatory, October, 1882, v. 294. The Sidereal Messenger, October, 1882; i. 139.

Plane *v.* Cylindrical Surfaces. By W. A. Rogers. Mechanics, No. 31, p. 90.

A Study of the Problem of Fine Rulings with respect to the Limits of Naked Eye Visibility and Microscopic Resolution. By W. A. Rogers. Am. Monthly Microscopical Journal, September, 1882, p. 165.

A Comparison of the Harvard College Observatory Catalogue of Stars for 1875.0 with the Fundamental Systems of Auwers, Safford, Boss, and Newcomb. By W. A. Rogers. Memoirs of the Am. Acad. of Arts and Sciences, x. 389–429.

On the Conditions of Success in the Construction of Standards of Length and in their Subdivision into Equal Parts. Read before the American Society of Microscopists at the meeting held at Elmira, N. Y., August, 1882. By W. A. Rogers. Mechanics, Oct. 27, 1882, and later.

A Plan for Securing Observations of the Variable Stars. By Edward C. Pickering. Cambridge, 1882. 8°.

On the Period of R Hydræ. By S. C. Chandler, Jr. Astronomische Nachrichten, ciii. 225.

Variable Stars. — The bibliography of the variable stars undertaken by Mr. Chandler last year has been nearly completed, so far as the preparation of the list of references is concerned. The catalogue of stars suspected of variability, and the remarks relating to each, are nearly complete. A plan has been prepared for securing co-operation in the observation of these objects. A pamphlet has been published relating to this matter, and will be furnished to all persons making application for it. It is hoped that many astronomers will be inclined to aid in this work, as observations which if detached might have little value would be most useful as part of an extensive system of observations. The aid of amateurs is especially invited, since the necessary skill is soon acquired and the habit of making observations of permanent utility would often have a value as great as the direct results anticipated. The aid of lady observers is also desired, since much useful work could be done by them at their own homes. Among the many ladies owning telescopes are doubtless some who have the time and inclination, and might, if properly directed, make observations of great value to science. The observations of the light curves of the variable stars of long period have been much neglected, and observations with this object in view are also needed. A number of observers have promised their aid, and by next year I shall hope to report a large amount of useful work accomplished.

Miscellaneous.

Cambridge was not selected by the United States Commission as a station for observing the transit of Venus. This was in some respects unfortunate, as a complete series of observations were made here in 1878 of the transit of Mercury. This was done at the request of the Naval Observatory, with the expectation that we should thus be prepared to observe the transit of Venus at the present time. On the other hand it is extremely doubtful whether the results obtained during the transit will add materially to our knowledge of the distance of the Sun, and the chance of a cloudy day is twice as great as that of a clear one. I regard the expenditure of money on large pieces of routine work, where a result of value is certain to be secured, as more advisable than any large expenditure for observing occasional phenomena, where clouds may prevent the attainment of any result. If clear, the contacts will be observed, with such other facts as can be noted without much previous expenditure of time or money. Photographs might have been taken without the aid of the United States Commission; but, as they would necessarily have been made according to a somewhat different system, it is doubtful whether they would have added to the value of the whole.

During the past year, no change has occurred in the corps of assistants, which remains as described in the last Report. The buildings and grounds have been kept in good order without alteration, except that an additional flight of steps has been placed near the southwestern corner of the building, to make the path along its southern side more readily accessible. The West Equatorial has been removed from its pier for use in experiments on the horizontal mode of mounting telescopes, and its place is temporarily supplied by an excellent six-inch refractor belonging to Mr. Chandler.

The time service, in general charge of Mr. Edmands, has been carried on successfully as in previous years. The time ball was dropped correctly on three hundred and fifty-nine days, three hundred and seventeen by telegraph and forty-two days by hand. On three days it failed to drop at twelve o'clock, and according to the rule was dropped precisely five minutes later. On two days it was impossible to obtain the signals, and on one day an accident to the machinery rendered it impossible to raise the ball.

FINANCIAL CONDITION.

Having thus considered the scientific work of the Observatory, its present critical financial condition may be stated briefly. The subscription of 1878, which has given us an increase in income of five thousand dollars, expires with the present year. With this, three instruments instead of one have been kept at work, the corps of assistants has been doubled, excellent progress has been made in reducing the observations of the past, and a large number of volumes of annals and brief publications have been issued. An attempt is now being made to secure a fund of one hundred thousand dollars to render permanent this increased rate of work. Over thirty thousand dollars have already been promised conditionally, the principal limitation being that at least seventy-five thousand dollars shall be secured before next September. A failure in this subscription will involve a return to the condition of comparative inactivity which we were previously obliged to maintain. With success, we shall have the means of accomplishing the amount of work to be expected from the standing of this University, and demanded by the advanced views regarding literary and scientific work held in this part of the country.

EDWARD C. PICKERING, *Director.*

To the President of the University:—

Sir,—I have the honor to submit the following Report upon the condition and progress of the Arnold Arboretum during the year ending August 31, 1882.

The City Council of the City of Boston in December, 1881, by a nearly unanimous vote, authorized their Park Commissioners to expend the sum of sixty thousand dollars in buying certain pieces of land adjacent to the Arboretum, on the condition that satisfactory arrangements could be made with the President and Fellows of Harvard College for the use, under certain restrictions, of the Arboretum as a public park. Some progress has since been made towards this arrangement, which, without interfering with the scientific aims of the Arboretum, will increase its local influence by freely opening its collections to the public, and by securing for it additional and greatly needed land, suitable and dignified approaches, and carriage drives. Sufficient progress, however, in these negotiations has not been made to authorize the final adoption of any plan of planting the collections; and it has been found necessary to postpone again the arrangement of the Arboretum. This delay is greatly to be regretted. It necessitates the constant moving of the plants in the nursery, thus increasing the cost of maintenance, and threatening to injure if not destroy many rare trees procured or raised for the Arboretum with no small labor; for, as I pointed out in my last Report, it is impossible to arrange the plantations in the grounds now occupied on any plan which could be adjusted to the larger scheme under contemplation.

The nurseries have been enlarged by the addition of an acre and three quarters, and have been almost entirely remodelled and replanted. They are in a satisfactory condition and contain a great number of valuable and interesting plants.

Various experiments in book-keeping have been tried from time to time with the view of preserving an accurate record of every plant in the collection; they have not hitherto been satisfactory, and have been abandoned as either too complicated or too expensive for practical working. The future value of the Arboretum would, however, be greatly increased, if the history of each tree could be preserved as a record of the hardiness and rate of growth of the species, or of different individuals of the same species raised under different conditions or descended from ancestors long subjected to different climatic conditions. An attempt, which promises to be successful, to preserve such records by means of a Card Catalogue similar to those now in general use in Public Libraries, has been made during the year, and a complete Catalogue of the collection has been prepared. A numbered card represents each species in the collection; and a card with the same number with an additional sub-number represents each distinct lot of plants of the species, raised at different times or obtained in a different manner from the lot represented by the first card.

The card contains the name of the species, the source from which the plant is derived, and, if raised in the Arboretum, the date at which the seed was sown, space being left for correcting the name when necessary, and for future records such as the date of final planting, or any notes upon the rate of growth, hardiness, &c., of the species which may seem desirable. This plan offers many advantages, and it is hoped that it will bear the test of continuous use. The collection is now represented by some 2,250 cards.

The interchange of plants and seeds with other botanical and horticultural establishments has been continued during the year. There have been 6,101 plants and 181 packets of seeds distributed, as follows: to all parts of the United States 4,792 plants (including a large number of cuttings supplied to different Public Gardens, and nursery establishments in various parts of the country), and 92 packets of seeds; to Great Britain, 910 plants, and 45 packets of seeds; to the Continent of Europe, 85 plants, and 40 packets of seeds; to St. Helena, 150 plants; to the Cape of Good Hope, 1 packet of seeds; to China, 150 plants; to Canada, 14 plants; to Australia, 2 packets of seeds; to India, 1 packet of seeds.

There have been received during the year 1,477 plants, and 247 packets of seeds from 41 donors.

Herbarium and Museum.—The Herbarium and Museum have lost during the year the advantage of the devoted care of Mr. John Robinson, who has been called to other scientific duties. Mr. Robinson has had charge of these departments of the Arboretum from their beginning, and their excellent condition and efficient working-order are due to his labors. Mr. Charles E. Faxon has assumed the duties performed by Mr. Robinson.

Routine work has been continued during the year upon the Herbarium, which has received several important additions. The accessions of dried plants, woods, fruits, &c., numbering upwards of 700, have been received from 34 donors. Specimens of rare North American trees, principally Oaks and *Coniferæ*, to the number of 790, have been distributed during the year to 23 individuals and Institutions in the United States and Europe.

During the year an English translation of the Comte de Cars Treatise upon the Pruning of Forest Trees has been prepared at the Arboretum, and published by the Trustees of the Massachusetts Society for Promoting Agriculture. During the last three years the Director has been actively engaged in studying the forests of the United States, and the economic value of North American woods, for the purpose of preparing a report upon this subject to be published as a Special Report of the 10th Census. Twenty Forestry Bulletins, generally accompanied by maps illustrating the forests of different parts of the country and containing some of the results of this investigation, have been published by the Department of the Interior during the year. The final report is nearly completed, and will probably appear during the next academic year.

Mr. Faxon has begun a set of detailed botanical drawings of the trees of the United States, to illustrate a new North American Sylva, which the Director has undertaken to prepare under the auspices of the United States Government. A set of colored drawings of the flowers and fruits of North American trees has also been commenced during the year to illustrate the very important Jesup collection of American forest products, which has been gathered under the general supervision of the Director of the Arboretum for the American Museum of Natural History at New York.

The Museum and Herbarium still find temporary accommodation in the Dwight House, Warren St., Brookline.

C. S. SARGENT, *Director.*

To the President and Fellows of Harvard College:—

During the past year the corner-piece of the Museum has been plastered, and some of the rooms are already occupied. This part of the building can be completed in such time that the Zoölogical and Geological laboratories will be ready for use at the opening of the next academic year.

The usual courses of instruction have been given at the Museum by Professors Whitney, Hagen, James, Farlow, and Faxon, and by Messrs. Mark, Davis, and Wadsworth.

For the details of this instruction and that in charge of Professor Whitney, I would refer to their several reports.

Two of the assistants of the Museum and two advanced students spent the greater part of the summer at my Newport laboratory. The former devoted their time principally to embryological studies of annelids, fishes, and polyps. The collections sent for study to Professors Verrill, Smith, and Mackintosh have been returned by them.

About eight hundred volumes have been added to the Library during the past year. A special list of the Museum publications is given to Appendix A of this Report; they are somewhat more extensive and numerous than has usually been the case, consisting of twelve numbers of the Bulletins, and of two numbers of the Memoirs. The publications issued elsewhere by several specialists, based mainly upon Museum materials, are mentioned in the special Reports of the Assistants of the Museum.

The publication of the preliminary Reports on the "Blake" collections has made excellent progress during the past year. There now remain unfinished of these only those upon the Fishes, Halcyonoids, Foraminifera, Ostracoids, Nemerteans, and some minor groups, as well as the Report on the bottoms. It has been decided to publish only the final Reports of the fishes of the east coast and of the Holothurians. That on the fishes will be published in connection with the United States Fish Commission, and include many species of shallower waters, first brought to light by the dredgings of the "Fish Hawk." Professor G. B. Goode and Dr. Bean have already prepared the greater part of this Report. Dr. H. Theel, of Stockholm, who has undertaken to work up the Holothurians, hopes next spring to transmit his final Report to the Royal Swedish Academy of Stockholm, where it is to be published. Professor Verrill has completed the examination of the east coast Halcyonarians and Actinariæ, and is preparing a Report of these and of those of the Caribbean and Gulf of Mexico for the Museum Bulletin. Work is progressing favorably on the other Reports. I have myself nearly completed Part I. of the final Report on the Echini, twenty plates are already on stone, and the remaining plates are well advanced. Concerning the results of the explorations of the Tortugas, undertaken in 1881 under the auspices of the United States Coast Survey, I am preparing for the Museum Memoirs a monograph on the Porpitidæ and Velellidæ of the Gulf Stream. The twelve plates to accompany this Memoir are completed. A second memoir on the structure of the Tortugas, and the distribution of the corals forming that part of the Florida Reefs, is also nearly completed. It will be illustrated by two maps and two plates, representing sections of the reef.

Mr. W. H. Dall is now engaged in preparing the final report on the "Blake" mollusca. His preliminary Report on the mollusca collected by the United States Coast Survey Steamer "Blake" has been issued in parts from July to December, 1881. Bull. M. C. Z. IX. No 2; pp. 111.

Mr. P. H. Carpenter has concluded his preliminary Report on the Comatulæ of the "Blake." It was published in October, 1881. Bull. M. C. Z. IX. No. 4; pp. 18. The crinoids of the "Blake" collection, which had been placed in the hands of the late Sir Wyville Thomson for determination, to be worked up in connection with the "Challenger" material, have been transferred by Mr. John Murray, of the "Challenger" office, to Mr. Carpenter. Mr. Carpenter proposes in connection with his father, Dr. W. B. Carpenter, to work out as fully as practicable the minute anatomy of Pentacrinus, for which the material collected by the "Blake" is quite extensive. In addition to the Pentacrinus material, our specimens of Holopus were also placed in his hands. Mr. Carpenter is now preparing a preliminary report on this part of the "Blake" collection. During the spring, Professor S. I. Smith has completed his Report on the Crustacea collected by the "Blake" off the Atlantic coast of the United States, during the summer of 1880. We are under great obligations to Professor Smith, not only for the masterly manner in which he has accomplished his task, but also for his promptness in writing this

Report, and preparing the excellent plates which accompany his Report. Professor Smith's Report was published in June, 1882. Bull. M. C. Z. X. No. 1; pp. 108, pl. 16.

Dr. J. W. Fewkes, who accompanied me as assistant to the Tortugas during the winter of 1881, has written a report on the jelly-fishes we collected while carrying on explorations of the Tortugas, under the auspices of the United States Coast Survey. Bull. M. C. Z. IX. No. 7; pp. 40, pl. 7. April, 1882.

Dr. Fewkes has also worked up some of the results of his studies on the jelly-fishes of the New England coast, carried on in my laboratory at Newport. Bull. M. C. Z. IX. No. 8; pp. 20, pl. 2. April, 1882.

The other publications of the Museum issued during the past academic year are: —

Observations upon the species of the genus Partula, by Dr. W. D. Hartman. Bull. M. C. Z. IX. No. 5; pp. 26, 2 pl. The collection of the species of the genus Partula, made by Mr. Garrett for the Museum, forms a large part of the material placed at the command of Dr. Hartman.

Of the Memoirs, Part II. of Vol. VII. No. 2, — the climatic changes of later geological times, — has been published by Professor J. D. Whitney. Memoirs M. C. Z. VII. No. 2; Part II.; pp. 121–264. March, 1882. The concluding part of this memoir is well advanced.

Of the Geological Series Vol. VII. there have been issued No. 6, by Professor Lesquereux, on recent additions to the collections of fossil plants of the Museum, and No. 7 by Mr. Wolff, on the great dyke at Quincy, Mass.

The second part of the sixth volume of the Bulletin has been published, completing that volume. It contains an important paper by Dr. E. L. Mark, on the maturation, fecundation, and segmentation of Limax campestris; 5 pl., pp. 552. Besides a general review of what is known of the same phenomena in other classes of the animal kingdom, based upon his own researches on this difficult subject, Dr. Mark has added an exhaustive bibliography.

I have also undertaken, in connection with Professor Faxon and Dr. Mark, to issue in the Museum Memoirs a "Selection from Embryological Monographs," which will contain 4to illustrations compiled from monographs scattered through innumerable scientific transactions and periodicals, and serve as an atlas to accompany any text-book on Embryology, such as Kölliker, Balbiani, Balfour, etc. Such a publication will, I hope, be found most useful to students and teachers. The 4to illustrations will be accompanied by a carefully prepared description of the plates, and an 8vo bibliographical list. The 4to illustrations and the bibliographical lists will be issued in parts limited to special groups of the animal kingdom.

The first part of the illustrations "Crustacea," has been prepared by Professor Faxon, and was published during this summer. Mem. M. C. Z. IX. No. 1; 14 pl., with an explanation of the Plates, June, 1882. Professor Faxon also prepared the Bibliography to accompany the Crustacea; it was published in March, 1882. Bull. M. C. Z. IX. No. 6; pp. 53. I have myself prepared the Bibliography of the Echinoderms. This was published in August, 1882. Bull. M. C. Z. X. No. 2, pp. 30, and I hope to finish the selection of the illustrations for the Echinoderms in time to issue the second part during this winter. Several of the plates of the acalephs and polyps are finished. I shall have the assistance of Dr. Fewkes in completing the preparation of this part. Professor A. S. Packard, Jr., has consented to take charge of the part relating to insects.

Other memoirs have also been prepared by the officers of the Museum and published elsewhere. They will be found mentioned in the reports of the special departments. I may mention specially the final Report on the Ophiuridæ of the "Challenger" expedition by Mr. Theodore Lyman, forming a part of Vol. IV. of the Zoölogical Results of the "Challenger." The preliminary Reports in the "Comptes Rendus" of some of the Crustacea collected by the "Blake" by Professor Alphonse Milne-Edwards, I have myself published in the Proc. Am. Acad. XVII; pp. 271-302, 20 pl. July, 1882. Part III. of the Young Stages of Osseous Fishes.

The late Professor F. M. Balfour has published, in connection with Mr. Parker, in the Proceedings of the Royal Society, a preliminary account of the Embryology of Lepidosteus based upon the material sent him from our Museum. Professor Mackintosh has completed his examination of the large series of sections of spines of sea-urchins sent him by the Museum. His Report has been sent for publication in the Memoirs of the Royal Irish Academy of Dublin.

The arrangement of the new rooms which have become available for exhibition and for storage has made excellent progress. All the material temporarily stored in the exhibition rooms has at last been removed and distributed to its final position, so that we may now hope within reasonable time to open all our Zoölogical Exhibition Rooms to the public, even should they not exhibit all the specimens we expect to place in them.

The greater part of the gallery of the Systematic Collection of Mollusks has been arranged, and Messrs. Hamlin and Hyatt hope to finish the work on the Mollusks during the coming year. The Systematic Collection of Fishes is now on exhibition and comprises the typical forms of the recent bony fishes, of the Selachians and of the Ganoids. It only remains now to intercalate the blanks and many of the fossil forms to complete this room.

The Systematic Collection of Birds is undergoing its final arrangement. A large part of the faunal collections intended for the Indian and Australian rooms has been placed in their exhibition cases, so that these rooms also can probably be open to the public during the coming winter. Fair progress has likewise been made in the African faunal collection. The skeletons of the reptiles, fishes, birds, and mammals, have been placed in the storage rooms destined for their use. The workroom containing the corals, polyps, echinoderms and sponges has been partially occupied, and Mr. Fewkes has arranged in the Systematic Room of Radiates a selected collection of Alcyonoids.

Mr. Garman has continued the explorations made by him during the two previous years, and has brought together an enormous collection of mammalian remains, — one of the finest, indeed, ever brought from the West. The thanks of the Museum are specially due to Dr. McGillicuddy of the Pine Ridge Indian Agency for the assistance he has given to Mr. Garman, and for his interest in his behalf.

Professor A. Lakes has continued to send fossil plants from Colorado to the Museum; they have as formerly been carefully identified by Professor Lesquereux.

The past winter Mr. Sternberg spent in Texas collecting fossil vertebrates from the permian. His collections have reached Cambridge safely; we are indebted to Major Henry of the 19th Cavalry, the Commander of Fort Sill, for the assistance he rendered to Mr. Sternberg while at work in his district. Later in the season Mr. Sternberg returned to Kansas, where he is still engaged in making collections for the Museum.

I have specially to thank the Secretary of War, the Hon. R. T. Lincoln, and the Secretary of the Treasury, the Hon. H. M. Teller, for the letters of introduction they were kind enough to send to Messrs. Sternberg and Garman for use in the Territories they explored.

Major Powell, the Director of the United States Geological Survey, kindly allowed the Museum the privilege of sending a collector under certain restrictions with the expedition sent by the survey in charge of Mr. C. D. Walcott to collect palæozoic fossils. It will of course be of great importance to the Museum, in view of our recent acquisitions, that we should have as full a representation as possible of the Western palæozoic fossils.

Mr. Fewkes was sent by the Museum to examine the Bermudas, in hopes of finding it a suitable and accessible locality for studying the surface Fauna of the Gulf Stream. He is preparing a report of his expedition for the Bulletin.

Dr. Hagen spent the greater part of the summer on the line of the Northern Pacific Railroad making an entomological survey for the Northern Pacific Transcontinental Company. He collected during his trip a large number of insects from localities as yet little visited by naturalists.

Large accessions for the faunal collections have been purchased from Professor Ward. In addition to these purchases, we have also received in exchange or as gifts a number of collections mentioned in the special Reports.

During the past year the accessions to our invertebrate palæontological collections have been most important. The Museum has purchased from Mr. E. Haeberlein a large collection of Solenhofen fossils, the duplicate of a collection purchased some time ago from him by the British Museum; though, of course, it did not contain its greatest treasure, the Archeopteryx. But by far the most valuable accession we have received during the past year is the collection of Silurian fossils of Bohemia, brought together by the late J. M. von Schary, which has been purchased from his heirs. This collection is of the greatest value to American palæontologists, as it will give us the means of comparing the types of the great collections which have formed the basis of the works of Barrande and of Hall. Some idea of the magnitude of this collection may be formed from the fact that it contains over 100,000 specimens; of these probably two thirds of the collection, no less than 1231 species, representing 157 genera, are identified.

The whole collection was packed by Professor Hamlin, who was sent out from the Museum on purpose to secure it. To Professor Poshepny we are under the greatest obligation for his services in carrying out the negotiations which ended in the purchase of this prize. The Schary collection, taken in connection with the collections brought together from American localities, now makes our collection of palæozoic fossil invertebrates one of the finest in existence.

Among the collections purchased in Europe, I may also mention a fine collection of green-sand fossils from Cambridge; a collection of fossil fishes from the upper Cretaceous of the Lebanon, Syria; and a good collection of Devonian fishes from Cromarty, Scotland, with a few specimens from the Mountain Limestone of Armagh, Ireland.

ALEXANDER AGASSIZ, *Curator.*

APPENDIX.

I.

To the President and Overseers of Harvard University.

Gentlemen, — Would you accept the sum of fifty thousand dollars for the purpose of providing such medical education for women as will entitle them to the degree of Doctor of Medicine from your University?

This sum to be held by you in trust, and the interest of the same to be added to the principal until the income of the fund can be used for such medical education of women.

If such an arrangement cannot be made within ten years, the fund to be returned to the donors.

(Signed)

Marie E. Zakrzewska, M.D., Lucy E. Sewall, M.D., Helen Morton, M.D.,	Boston.
Emily Blackwell, M.D., Mary Putnam Jacobi, M.D., Elizabeth M. Cushier, M.D.,	New York.

Eliza M. Mosher, M.D., South Framingham.
C. Annette Buckel, M.D., San Francisco.
Alice M. Bennett, M.D., Norristown, Pa.

By Emma L. Call, M.D.,
Secretary of N. E. Hospital Medical Society.

151 Boylston Street, Boston.

II.

At a special meeting of the Faculty on April 8, 1882, present 16 members.

1. Whereas the committee of the Medical Faculty appointed to confer with a committee of the Overseers have laid before the Faculty a request of the committee of the Overseers that they be furnished with the reasons that have guided the Faculty in adopting the following vote, viz.: —

"Voted, that if the President and Fellows have a desire to be informed of the present views of the Medical Faculty upon the question of female medical education in the University, the latter would respectfully state that in their opinion it is not advisable that the President and Fellows should open a course of medical study to women under the auspices of the University."

2. The Medical Faculty would say, in reply, that many of the various reasons which have influenced them in passing this vote are already to be found in the abundant and accessible literature of the subject of female medical education. It is the belief of the Medical Faculty that the Overseers do not desire now to exact from them an extended recapitulation of what has already been said upon this subject.

3. Further reasons have been furnished by their committee to the committee of the Overseers at their meeting of conference.

4. Finally, the Medical Faculty would record their opinion as follows: —

Voted, that the fact that the Medical Faculty is strongly adverse to undertaking female medical education would be, in their belief, of itself, fatal to the success of an attempt in that direction.

5. Voted, that female medical education cannot be undertaken in the Medical School without a serious risk of detriment to the interests of the medical education now given to men.

This reply was unanimously adopted, except that two votes were cast against the resolution numbered 5.

III.

The following list gives an approximate statement of money paid for lands and buildings for University uses since Sept. 1, 1869, including present contracts and the proposed physical laboratory. The items in heavy-faced type were gifts, or built with money given; the other items were paid for by the President and Fellows. Italic figures distinguish the items on which there is at present some income, the aggregate of these items being $510,528.44. All the other sums are unproductive.

1869–70.	Harvard and Massachusetts Halls, remodelled		$19,966.87
1869–72.	Land near the Observatory		10,480.44 *3,000.00*
1869–71.	Marsh lands	**In Brighton**	12,000.00
		For boat-house	1,080.00
		Sundry	902.12
1869–70.	Jarvis Field (contribution towards cost of)		15,000.00
"	**Thayer Hall**		***100,000.00*
1870–71.	Holyoke House		*120,470.97*
"	" "	Party wall, 1873–74	*2,374.15*
"	" "	Iron stair-case, 1876–78	*3,119.40*
"	College House, story added		*20,397.76*

1870-71.	Holmes estate { **Gifts, 24,500** 30,500 } $55,000 . .	{ 48,000.00 *7,000.00*
"	**Botanical laboratory and lecture-room**	*15,000.00
"	Medical College. **Gift 2,500**	*7,000.00
"	Dental School	15,000.00
1870-72.	**Bussey Buildings**	59,941.01
1871-72.	Boylston Hall, roof story added	13,310.00
"	" " fire-walls and cases	*3,500.00
"	**Matthews Hall**	**113,000.00*
"	**Weld Hall**	**87,000.00*
1871-73.	Scientific School, remodelled	18,032.71
"	Moving Dane Hall and the Bursar's Office	9,120.24
1872-73.	**Appleton Chapel.** Galleries and decoration . . .	15,359.62
"	**Bussey water-supply and sheds**	4,511.83
1873-74.	Brick and stone walks in the Yard	4,847.33
1873-75.	Dining-Hall. Items paid by the Corporation . . .	*5,000.00
1874-75.	Hospital	3,502.85
"	Advances to Dining-Hall Association	*48,219.75*
"	Boat-house	*2,000.00*
1869-76.	**Memorial Hall**	368,980.90
1875-78.	Gore Hall extension	89,012.68
1876-77.	Boat-house	*3,946.41*
"	Delta fence	3,990.00
1876-82.	**Peabody Museum** (building and cases)	73,507.74
1878-79.	**Hemenway Gymnasium**	*103,000.00
"	**Herbarium improvements**	4,500.00
1878-80.	**Sever Hall**	117,460.32
1880-81.	Morse estate	16,873.00
1880-82.	**Gore Hall**, improvement of cellar	2,897.64
1869-82.	**Museum of Zoölogy**, enlargements and cases . . .	*200,000.00
1881-83.	**Medical School**, land and building (present contract and extras)	*285,000.00
1882-83.	**Law School** (present contract for)	*135,000.00
1883-84.	**Physical Laboratory** (gift for)	*115,000.00
	Total	$2,307,305.92

* Not exact.

IV.

SUMMARY OF STUDENTS IN THE UNIVERSITY AT THE BEGINNING OF THE ACADEMIC YEAR 1881–82.

College,		
Seniors	182	
Juniors	207	
Sophomores	217	
Freshmen	217	
		823
Unmatriculated Students		34
Lawrence Scientific School		30
Bussey Institution		5
Dental School		21
Medical School		241
Law School		151
Divinity School		29
Candidates for the degrees of A.M., Ph.D., and S.D.		41
Holders of Fellowships		7
Resident Graduates not Candidates for a Degree		3
		1385

Persons who attended the Summer Courses in Science in 1882.

Chemistry	33

Number of Certificates issued to Women in 1882.

Preliminary Examination (Old Method)	2
Advanced Examination (Old Method)	2
Final Examination (New Method)	5
	9

V.

ACADEMIC HONORS FOR THE YEAR 1881–82.

COMMENCEMENT, JUNE 28, 1882.

Orations.

George Lyman Kittredge,
Frank Nelson Cole,
Albert French Lane,
Arthur Prescott Lothrop,
George Morey Richardson,
William Cushing Wait,
Russell Whitman,
John Whiting Mason,
Frederick Russell Burton,
Owen Wister.

Dissertations.

Joseph Henry Beale,
Thomas William Ludlow,
Franklin Arthur Dakin,
Charles Hallam Keep,
Frank Gaylord Cook,
William Harrison Dunbar,
William Lowell Putnam,
Asaph Hall,
Homer Gage,
George Washington Dickerman,
William Boyd Fiske,
Charles Moen Rice,
Lucien Moore Robinson,
John Eliot Bullard,
Alfred Marston Allen,
Roland Thaxter,
George Lowell Mayberry,
Frederic Atherton Fernald,
Albert Andrew Howard,
Luther Stetson Anderson,
Charles Henry Goldthwaite,
William Hobbs Manning,
William Jones,
Godfrey Lowell Cabot,
William Henry Burnham,
Philip Moen Washburn,
Edward Knights Stevens,
Sam Henry Morrill,
Herbert Grafton Woodworth.

Disquisitions.

Richards Merry Bradley,
Ivan Nikolayevitsh Panin,
Robert Luce,
Joseph Ruggles Worcester,
John Walter Perkins,
Frederic Clinton Woodbury,
John Plumer Lyons,
Joseph Payson Clark,
John McGaw Foster,
Clarence Bancroft,
Charles Armstrong Snow,
Charles Eliot,
Alfred Eugene Miles,
John McGregor Cochrane,
George Herbert Eaton,
George William Perkins,
Arthur Messinger Comey,
Frederic Norton Goddard,
Montgomery Adams Crockett,
Benjamin Rufus Kittredge,
Charles Denston Dickey,
William Henry Danforth,
Henry Winthrop Hardon,
Joseph Austin Coolidge,
James Woods Babcock,
Alexander Boyd,
Charles Edgar Boynton,
Wendell Phillips Davis,
Frank Edward Fuller,
Horace Emmet Smith,
Robert Cumming,
Charles Green Rockwood Jennings,
William Joseph Rushmore,
Frederic Mather Stone,
George Trumbull Hartshorn,
James Jay Greenough,
Edwards Cheney,
Charles Townsend Copeland,
Harry Cormerais French,
George Bradford Dunbar,
McLaurin Jameson Pickering,
Charles Walker Andrews,
Richard Delaney,
Chambers Baird,
Harold Marsh Sewall,
Guy Waring,
Charles Francis Cutler,
George Francis Barlow.

Honors at Graduation.

In Classics.

George Lyman Kittredge,	Highest Honors.
George Morey Richardson,	Do.
Franklin Arthur Dakin,	Honors.
Charles Henry Goldthwaite,	Do.
Albert Andrew Howard,	Do.
William Jones,	Do.
Albert French Lane,	Do.
William Hobbs Manning,	Do.
Russell Whitman,	Do.
Herbert Grafton Woodworth,	Do.

In Philosophy.

Russell Whitman,	Highest Honors.
William Henry Burnham,	Honors.

In History.

Arthur Prescott Lothrop,	Highest Honors.
William Cushing Wait,	Do.
Edmund Allen Whitman, A.B.,	Do.
Alfred Marston Allen,	Honors.
Frank Gaylord Cook,	Do.
Homer Gage,	Do.
Philip Moen Washburn,	Do.

In Mathematics.

Frank Nelson Cole,	Highest Honors.
John Whiting Mason,	Do.
Asaph Hall,	Honors.
William Lowell Putnam,	Do.

In Chemistry.

Godfrey Lowell Cabot,	Honors.
Charles Robert Sanger, A.B.,	Do.
Edward Knights Stevens,	Do.

In Music.

Frederick Henry Burton,	Highest Honors.
Owen Wister,	Do.
Sam Henry Morrill,	Honors.

Honorable Mention at Graduation.

Alfred Marston Allen. *Political Economy; History.*
Luther Stetson Anderson. *German; French.*
Charles Walker Andrews. *History.*
James Woods Babcock. *Natural History.*
Chambers Baird. *History.*
Clarence Bancroft. *Chemistry.*
George Francis Barlow. *Philosophy.*
Joseph Henry Beale. *Music; Mathematics; English Composition; Greek.*
Alexander Boyd. *History.*
Charles Edgar Boynton. *Chemistry; History.*
Richards Merry Bradley. *Political Economy; History.*
John Eliot Bullard. *Philosophy.*
William Henry Burnham. *Philosophy; English Composition.*
Frederick Russell Burton. *Music.*
Godfrey Lowell Cabot. *Chemistry.*
Edwards Cheney. *Music.*
Joseph Payson Clark. *English.*
Frank Nelson Cole. *Mathematics.*
Arthur Messinger Comey. *Chemistry.*
Frank Gaylord Cook. *Philosophy; History; Greek; Political Economy.*
Joseph Austin Coolidge. *German.*
Charles Townsend Copeland. *History.*
Montgomery Adams Crockett. *Natural History.*
Robert Cumming. *Music.*
Charles Francis Cutler. *History.*
Franklin Arthur Dakin. *Greek; Latin; English Composition.*
William Henry Danforth. *Natural History.*
Wendell Phillips Davis. *Music; German.*
Richard Delaney. *History.*
George Washington Dickerman. *Philosophy; Greek.*
Charles Denston Dickey. *History.*
George Bradford Dunbar. *Natural History.*
William Harrison Dunbar. *History; Political Economy.*
George Herbert Eaton. *Philosophy.*
Frederic Atherton Fernald. *Chemistry.*
Burton Monroe Firman. *Philosophy; English Composition.*
William Boyd Fiske. *Natural History; Chemistry.*
John McGaw Foster. *English Composition.*
Harry Cormerais French. *Natural History.*
Frank Edward Fuller. *English; English Composition.*
Homer Gage. *History.*
Frederic Norton Goddard. *French.*
Charles Henry Goldthwaite. *Greek; Latin.*
James Jay Greenough. *Mathematics; Physics.*
Asaph Hall. *Mathematics.*

Henry Winthrop Hardon. *Greek.*
George Trumbull Hartshorn. *Chemistry.*
Albert Andrew Howard. *Greek; Latin.*
Henry Mascarene Hubbard. *Natural History.*
Charles Green Rockwood Jennings. *Chemistry.*
William Jones. *Greek; Latin.*
Benjamin Rufus Kittredge. *History.*
George Lyman Kittredge. *Greek; Latin; English; English Composition.*
Albert French Lane. *Greek; Latin; English Composition.*
Heyward Gibbons Leavitt. *Chemistry.*
Arthur Prescott Lothrop. *Political Economy; History.*
Robert Luce. *History; Political Economy; English Composition.*
Thomas William Ludlow. *Greek.*
Walter Irving McCoy. *Philosophy.*
William Hobbs Manning. *Greek; Latin; History.*
John Whiting Mason. *Mathematics.*
George Lowell Mayberry. *Physics; Philosophy.*
Alfred Eugene Miles. *Philosophy.*
Sam Henry Morrill. *Music.*
Edmund Seahon Perin. *Natural History.*
George William Perkins. *Natural History.*
John Walter Perkins. *Natural History; Political Economy.*
McLaurin Jameson Pickering. *History.*
William Lowell Putnam. *Mathematics.*
Charles Moen Rice. *Mathematics.*
George Morey Richardson. *Greek; Latin.*
Lucien Moore Robinson. *Physics; History.*
William Joseph Rushmore. *History; English Composition.*
Harold Marsh Sewall. *History; English Composition.*
Horace Emmet Smith. *History.*
Charles Armstrong Snow. *Greek; Philosophy.*
Edward Knights Stevens. *Chemistry.*
Frederic Mather Stone. *Greek.*
Roland Thaxter. *Natural History; English Composition.*
William Cushing Wait. *Political Economy; History.*
Guy Waring. *Natural History.*
Philip Moen Washburn. *History.*
Russell Whitman. *Philosophy; Greek; Latin.*
Owen Wister. *Music; Philosophy; English Composition.*
Frederick Clinton Woodbury. *Natural History.*
Herbert Grafton Woodworth. *Greek.*
Joseph Ruggles Worcester. *Mathematics.*

Second-Year Honors.

In Classics.

Juniors:

Edwin Guthrie McInnes,	Highest Honors.
Walter Elijah Damon,	Honors.
Charles Frederick Nirdlinger,	Do.
Joseph Henry Sheffield,	Do.
Horace Elmer Sprague,	Do.

Sophomores:

Josiah Bridge,	Highest Honors.
George William Brown,	Do.
William Wallace Fenn,	Do.
William Amory Gardner,	Do.
George Andrew Stewart,	Do.
Henry Elbert Barnes,	Honors.
Heinrich Conrad Bierwirth,	Do.
Ernest Lee Conant,	Do.
Theodore Longfellow Frothingham,	Do.
William Halsey Garrison,	Do.
Philip Henry Goepp,	Do.
Charles Theodore Greve,	Do.
Eugene Hamlin Hatch,	Do.
Edward Andress Hibbard,	Do.
John Andrew Noonan,	Do.
Albert Sanborn Perkins,	Do.
Edwin Martin Pickop,	Do.
Lawrence Eugene Sexton,	Do.
Correa Moylan Walsh,	Do.

In Mathematics.

Juniors:

Osgood Putnam,	Honors.

Sophomores:

Joseph Arthur Willis Goodspeed,	Highest Honors.
George Herbert Perkins,	Do.
George William Sawin,	Do.
Romeo Green Brown,	Honors.

VI.

PRIZES.

DETURS.

THE following students received books, called "Deturs," from the foundation of Edward Hopkins, for excellence in scholarship : —

Freshmen of 1880–81.

Clift Rogers Clapp.
Ernest Lee Conant.
Allen Curtis.
Edward Wheeler Frost.
Joseph Arthur Willis Goodspeed.

Freshmen of 1881–82.

Victor Clifton Alderson.
William Francis Bacon.
Hugh Henry Brogan.
Allen Howard Chamberlain.
Arthur Deloraine Corey.
George Arthur Craigin.
George Fauntleroy Davidson.
Bancroft Gherardi Davis.
Theodore Dunham.
Edward Tyler Edgerly.
Samuel Lynde Foster.
John Hays Gardiner.
John McGregor Goodale.
Robert Stetson Gorham.
Otto Rheinhard Hansen.
Charles Mather Harrington.
Joseph Adna Hill.
John Francis Holland.
Lawrence Litchfield.
Joseph Mansfield Long.
Daniel William Lothman.
Theophilus Huntington Root.
Edward Irving Smith.
William Christopher Smith.
Abner Ernest Strong.
Ernest Lawrence Thayer.
Arthur Gordon Webster.
Charles Alexander Whittemore.
Edward Blake Young.

BOWDOIN PRIZES.

Frank Bolles, of the Class of 1882 in the Law School.
Robert Luce, of the Class of 1882.
George Lyman Kittredge, of the Class of 1882.
Osgood Putnam, of the Class of 1883.

BOYLSTON PRIZES FOR ELOCUTION.

First Prizes.

Burton Monroe Firman, of the Class of 1882.
Sherman Hoar, of the Class of 1882.

Second Prizes.

George Herbert Eaton, of the Class of 1882.
George Hyde Page, of the Class of 1883.
Osgood Putnam, of the Class of 1883.

LEE PRIZES FOR READING.

Sophomores.

George Read Nutter.
Milton Jerome Stone.
Edward Franklin Weld.
Lucius Junius Henderson.
Edward Blake Young.

Freshmen.

Howard Augustus Taylor, from Wilson & Kellogg's School.
Odin Barnes Roberts, from the Chauncy Hall School.
Crosby Church Whitman, from Adams Academy.
Edward Everett Hamlin, from the Roxbury Latin School.
Edward Everett Rose, from the Chauncy Hall School.
George Edwin Howes, from the Boston Latin School.

VII.

DEGREES.

Bachelors of Arts of the Class of 1882	177
Bachelors of Arts of former Classes	5
Bachelors of Divinity	5
Bachelors of Laws	23
Doctors of Medicine	86
Doctors of Dental Medicine	3
Civil Engineer	1
Bachelor of Science	1
Bachelor of Agriculture	1
Doctor of Science	1
Masters of Arts	7

HONORARY DEGREES.

Masters of Arts.

Horatio Hale.
Henry Lee Higginson.

Doctors of Laws.

Henry Jacob Bigelow.
William Crowninshield Endicott.
Marcus Morton.
Charles O'Conor.

VIII.

COMMITTEES OF THE OVERSEERS, FOR 1882.

To visit the University.

President of the Board of Overseers.
His Excellency the Governor.
His Honor the Lieutenant-Governor.
The President of the Senate.
The Speaker of the House of Representatives.
The Secretary of the Board of Education.
The Secretary of the Board of Overseers.
The Chairman of each of the Visiting Committees.

To visit the College. — On Government.

Edwin P. Seaver.
Edward E. Hale.
Theodore Lyman.
Francis G. Peabody.
Henry Lee.
Charles R. Codman.
John Noble.
J. T. G. Nichols.
Waldo Higginson.
Le Baron Russell.
Moorfield Storey.
John Fiske.
James E. Cabot.
Richard M. Hodges.
Oliver W. Holmes, Jr.

To visit the College. — On Languages.

Le Baron Russell,
Robert D. Smith.
Thomas W. Higginson.
John Noble.
Roger Wolcott.
Arthur Dexter.
W. B. Swett.
Charles P. Curtis.
Robert E. Babson.
J. B. Torricelli.
Edward Edes.
Carl Wolff.
Lucius H. Buckingham.
Octavius B. Frothingham.
Thomas J. Cushing.
Francis A. Waterhouse.

To visit the College. — On Rhetoric and English Literature.

Moorfield Storey.
John T. Morse, Jr.
George B. Chase.
Roger Wolcott.
Henry W. Foote.
Charles P. Curtis.

To visit the College. — On History and Political Science.

John Fiske.
John T. Morse, Jr.
Alexander McKenzie.
Thomas W. Higginson.
Henry C. Lodge.
Edward G. Porter.
John O. Means.
James H. Means.
Russell Gray.
Abbott Lawrence.
Brooks Adams.
Edward Atkinson.

To visit the College. — On Philosophy.

James E. Cabot.
Alexander McKenzie.
Francis G. Peabody.
John Fiske.
Joseph B. Warner.
John O. Means.

To visit the College. — On Mathematics, Physics, and Chemistry.

Edwin P. Seaver.
Daniel B. Hagar.
William Watson.
George V. Leverett.
J. D. Runkle.
Percival Lowell.
David Sears.
Channing Whitaker.
Oliver Wadsworth.
Francis Blake, Jr.
Robert Amory.
Walter C. Cabot.

To visit the College. — On Natural History.

Richard M. Hodges.
Theodore Lyman.
George B. Bradford.
Henry Wheatland.
William H. Niles.
Thomas B. Curtis.

To visit the College. — On Fine Arts and Music.

Oliver W. Holmes, Jr.
Charles C. Perkins.
S. L. Thorndike.
John S. Dwight.
Arthur Dexter.
William F. Apthorp.
Charles A. Cummings.
Henry L. Higginson.
J. Francis Tuckerman.
Francis D. Millett.

To visit the Divinity School.

James F. Clarke.
Phillips Brooks.
Edward E. Hale.
Alexander McKenzie.
Edward H. Hall.
Adams Ayer.
Artemas B. Muzzey.
Franklin Johnson.
Waldo Higginson.
Henry W. Foote.
Charles F. Dole.
Thomas Hill.
Arthur Brooks.

To visit the Law School.

John Lowell.
Leverett Saltonstall.
George O. Shattuck.
Oliver W. Holmes, Jr.
William G. Russell.
Darwin E. Ware.
William C. Endicott.
Robert D. Smith.
Moorfield Storey.
Francis E. Parker.
Robert M. Morse, Jr.
Francis C. Barlow.
Peter B. Olney.
Charles C. Beaman, Jr.
Edmund Wetmore.

To visit the Scientific School, the Bussey Institution, the Peabody Museum of American Archaeology and Ethnology, and the Museum of Comparative Zoölogy.

Morrill Wyman.
Theodore Lyman.
R. M. Hodges.
Stephen Salisbury.
Edwin P. Seaver.
John O. Sargent.
Henry P. Kidder.
Benjamin S. Rotch.
Robert W. Hooper.
Gustavus Hay.
Channing Whitaker.
Charles O. Thompson.
T. J. Coolidge.
Alphonse Fteley.
Clemens Herschel.
Ernest W. Bowditch.
S. M. Felton.
William E. Worthen.
Thomas C. Clarke.

To visit the Medical School and Dental School.

Le Baron Russell.
Morrill Wyman.
Richard M. Hodges.
Samuel A. Green.
Joseph Sargent.
Frederic Winsor.
John G. Park.
George C. Shattuck.
Hall Curtis.
James L. Little.
Samuel L. Abbott.
Francis M. Weld.
Algernon Coolidge.
John C. Dalton.
Austin Flint.

To visit the Observatory.

James F. Clarke.
Charles R. Codman.
William Amory.
Amos A. Lawrence.
Francis G. Peabody.
J. Ingersoll Bowditch.
John C. Palfrey.
George I. Alden.
Robert Treat Paine.
J. R. Coolidge.
Robert C. Winthrop.
Charles F. Choate.
Alvan Clark.
Frederic O. Prince.
Augustus Lowell.
J. Montgomery Sears.
Simon Newcomb.

To visit the Library.

Phillips Brooks.
John Fiske.
John T. Morse, Jr.
John O. Sargent.
Francis G. Peabody.
Samuel A. Green.
William W. Greenough.
Charles A. Cutter.
George W. Wales.
Charles C. Smith.
Samuel S. Green.
Stephen Salisbury, Jr.
Samuel Eliot.
Delano A. Goddard.
Francis V. Balch.
Henry G. Denny.
Charles Deane.
Henry F. Jenks.
Mellen Chamberlain.
George Dexter.
John M. Brown.
Charles F. Adams, Jr.

To visit the Botanic Garden and Herbarium.

Leverett Saltonstall.
Fred L. Ames.
William Boott.
John Cummings.
William Gray, Jr.
Augustus Lowell.
H. H. Hunnewell.
J. Warren Merrill.
Francis A. Osborn.
John C. Phillips.
Henry P. Walcott.
Henry W. Sargent.
Henry C. Lodge.
J. Pierpont Morgan.
George Ellwanger.
Thomas Meehan.

On the Treasurer's Accounts.

Leverett Saltonstall.
John Lowell.
Henry P. Kidder.
Amos A. Lawrence.
Charles H. Parker.
Israel M. Spelman.
George B. Chase.

On Elections.

Henry W. Paine.
Moorfield Storey.
John Lowell.
William C. Endicott.
Leverett Saltonstall.

On Reports and Resolutions.

Robert D. Smith.
William C. Endicott.
Henry W. Paine.
William Amory.
Francis E. Parker.
Charles R. Codman.
Henry Lee.

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TREASURER'S STATEMENT.

SIGILLVM ACADEMIÆ : HARVARDINÆ : IN : NOV : ANG :

CHRISTO ET ECCLESIÆ

1882.

TREASURER'S STATEMENT.

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE:—

The Treasurer of the College submits the Annual Statement of the financial affairs of the University, for the year ending August 31, 1882, in the usual form.

The Funds separately invested, with the income thereof, are as follows: —

	Principal.	Income.
COLLEGE.		
Bowditch Scholarships (part of),		
$70,000, Massachusetts 5% Bonds, sold during the year, . .		1,681.95
Bassett Scholarships (part of),		
Mortgage, paid off during the year, ...		275.00
Pennoyer Scholarships (part of),		
Pennoyer Annuity in England, ...	4,444.44	277.50
Rumford Professorship (part of),		
French Rentes, ...	10,000.00	579.37
Jonathan Phillips Fund,		
Mortgage, ...	10,000.00	500.00
Daniel H. Peirce Fund (part of),		
Mortgage, ...	12,766.91	688.72
Samuel Ward's Gift,		
Ward's (Bumkin) Island, Boston Harbor, . . .	1,200.00	50.00
Botanic Garden Fund (part of),		
$17,000 New York Central R. R. Bonds, ...	17,000.00	1,020.00
LIBRARY.		
Charles Minot Fund (part of),		
$60,000, Buffalo, Bradford, & Pittsb. R. R. Bonds,	60,000.00	4,200.00
Ichabod Tucker Fund (part of),		
Policy of Mass. Hospital Life Insurance Co., . .	5,000.00	200.00
SCIENTIFIC SCHOOL.		
John B. Barringer Fund (part of),		
40 shares Schenectady Bank Stock, ...	2,200.00	200.00
Amounts carried forward, . . .	$122,611.35	$9,672.54

Amounts brought forward,	$122,611.35	$9,672.54
MUSEUM OF COMPARATIVE ZOÖLOGY.		
Agassiz Memorial Fund (part of),		
Personal notes (endorsed),	25,006.69	1,482.94
OBSERVATORY.		
Anonymous gift (now used to pay annuities),		
$1,000, Michigan South'n & No. Indiana R.R. Bond,	1,000.00	70.00
$2,000, Cincinnati Municipal Bonds,	2,000.00	140.00
$2,000 Minneapolis Municipal Bonds,	2,000.00	160.00
50 shares Pittsburg, Fort Wayne, & Chicago, R. R. Stock,	5,000.00	350.00
SPECIAL FUNDS.		
Bussey Trust,		
Real Estate,	413,092.80	16,170.12
Robert Troup Paine Fund (accumulating),		
$22,500 Mass. 5% Bonds,	25,805.00	1,071.59
New Law School Professorship,		
Personal note,	90,000.00	2,250.00
	$686,515.84	$31,367.19

The other Funds of the College are invested as a whole. The general investments, with the income thereof, are as follows: —

Investments.	Principal, September 1, 1881.	Principal, August 31, 1882.	Income.
Notes, Mortgages, &c.,	$711,103.74	$843,836.88	$45,168.20
Railroad Bonds and Premiums,	972,532.48	1,040,885.85	56,797.39
Railroad Stock,	32,150.22	106,811.93	3,395.00
New Boston Coal Mining Co. Bonds,	9,000.00	9,000.00	700.00
Bank Stock,	63,964.00	63,964.00	4,548.07
Manufacturing Stock,	102,058.29	102,058.29	8,578.40
Real Estate,	1,396,078.30	1,396,523.30	77,289.00
Unoccupied Lands,	75,487.79	75,487.79	
Brattle Street Reversion,	1,000.00	1,000.00	
Advances to Scientific School,	4,905.14	4,707.27	294.31
" " Dental School,	15,827.74	14,488.37	949.96
" " Bussey Trust,	40,566.13	40,566.13	2,028.31
" " Dining Hall Association,	37,232.16	36,232.16	2,233.93
" " Scudder's Catalogue,	233.42	208.86	
" " Books,		29.36	
" " Chinese Subscription,	374.38		
" for altering Appleton Chapel,	2,859.62	2,859.62	
" " repairing College Wharf,	411.88		8.12
Term Bills due Oct., 1882,	71,163.80	70,016.74	
Term Bills overdue,	2,259.56	2,367.01	
Cash in Suffolk National Bank,	19,063.38	9,211.25	
Cash in hands of Bursar,	1,131.61	5,090.99	
Totals of general investments,	3,559,398.64	3,825,345.75	201,985.69
Totals of special investments,	674,021.61	686,515.84	31,367.19
Amounts,	$4,233.420.25	$4,511,861.59	$233,352.88

During the year, $70,000 of Massachusetts bonds, belonging to the Bowditch Scholarship Fund, have been sold at an advance of $11,275 over their cost, and the gain has been credited to the capital of the Bowditch Scholarship Fund, the whole of which now shares in the "general investments." $217,000 of seven per cent railroad bonds have been sold at a premium of $39,567.50, which was a net gain of $10,487 upon their cost, but the whole premium has been credited to the account of "railroad bond premiums" to provide against any losses that may be made upon future sales. The same account has been charged with the premium on $236,000 of seven per cent railroad bonds bought, amounting to $35,325. The account of "railroad bond premiums" has been credited with $3340, which was taken from the interest received on $334,000 of seven per cent bonds held during the whole year, and with the difference between accrued interest repaid and that advanced during the year, amounting to $102.88. The sales and purchases of bonds were made to take advantage of changes in market prices from time to time, due to fluctuations both in the current rate of interest and in the demand for or supply of particular securities. The bonds bought yield upon their cost a net income one half of one per cent higher than the bonds sold, but they are all of a high class, and most of them provide for payment of both principal and interest in gold. All other changes in the investments of the University are accounted for by the receipts and payments hereinafter stated in detail.

The net income of the general investments ($201,985.69) has been divided at the rate of $5\frac{62}{100}$ per cent among the Funds to which they belong, except the Medical School and Law School Building Funds, which have received a special rate of four per cent on their balances during the period of construction. The balance of $208.97 has been placed to the credit of the University account.

The rate of income this year as compared with that for 1880–81 shows a gain of $\frac{26}{100}$ of one per cent, due chiefly to a higher average rate of interest upon temporary loans, and to less outlay proportionally upon repairs and improvements of productive real estate. For the year 1882–83 the rate of income is likely to be below five and a half per cent.

The following table shows the income available for the departments dependent upon the College proper, and the expenditures in those departments: —

Interest on funds for		
University Salaries and Expenses,	$17,825.86	
College Expenses,	3,176.42	
Library,	1,344.92	
College Salaries,	28,280.98	
Gymnasium, and repairs on College buildings,	none.	
College Term bills,	162,983.04	
Sundry cash receipts,	7,571.16	
		221,182.38
Expended for		
University Salaries and Expenses,	$25,473.69	
College Expenses,	39,269.63	
Library Salaries and Expenses (not books),	20,137.21	
College Salaries,	137,059.27	
Gymnasium Expenses,	6,272.02	
Settlement of account for Chinese Instruction,	2,954.51	
Repairs and insurance on College Buildings not valued on Treasurer's books,	4,754.69	
		235,921.02
Balance, showing deficit for the year, which has been charged off to Stock Account,		$14,738.64

For the University, College, and Library accounts there have been considerable gains from tuition fees and rent of rooms, and a temporary exemption from heavy charges for repairs and improvements, but the ordinary expenses of carrying on the work as now laid out, together with a special charge of nearly $3,000 for the settlement of the account for Chinese instruction, which included the cost of sending to China the widow and children of the late Ko Kun-hua, have left a deficit for the year amounting to $14,738.64, which sum has been taken from the unrestricted capital of the University. This year, for the first time, a fair proportion of the expenses of the Gymnasium and of the Bursar's office have been charged to the Law, Divinity, and Scientific Schools. During the year 1882–83 the Corporation will be able to keep the expenses within the income, partly by cutting off outlays, but chiefly from the increase in the number of undergraduates.

For the Divinity School the income from the new endowments and an increase of receipts from tuition fees and rent of rooms, as well as from the Bussey Trust, have made a surplus of $2,819.41, in spite of a larger expenditure for salaries. For 1880–81 there was a surplus of $2,217.41.

For the Law School there is a surplus of $364.26, the income from the new Book Fund having allowed a larger outlay upon books, and an increase of income from the Bussey Trust having partly covered the new charges on account of the expenses of the Gymnasium and the Bursar's office. The salary of the new professor has been provided for from the interest upon the note given for the foundation of the new professorship. For 1880–81 there was a surplus of $675.77.

The Medical School has made a surplus of $7,843.92, partly due to a small gain in fees from students. For 1880–81 the surplus was $5,946.69.

For the Dental School there is a surplus of $1,339.37, due to a large increase in the number of students. This surplus has been used to reduce the debt of the School. For 1880–81 there was a surplus of $304.43.

For the Lawrence Scientific School there is a surplus of $197.87, which has been used to reduce the debt of the School. The number of students has been much smaller than last year, the large increase of numbers then reported having proved to be only temporary. For 1880–81 there was a surplus of $3,041.35. The sum of $4,652.06 from the income of the Agassiz Memorial Fund has been used to repay in part the notes given by Mr. Agassiz to the Memorial Fund for advances on account of the extension of the Museum building. Mr. Agassiz has continued to make very large private outlays for the benefit of the Museum.

In the Observatory the expenses have consumed all the subscriptions for current use received within the year and left a deficit of $1,172.67, which has been met out of the annual subscriptions paid in advance during the year 1878–79. For 1880–81 there was a deficit of $1,537.22.

For the Bussey Institution there is a surplus of $805.55, due to a larger income from the Bussey Trust and a reduction of salary payments. This surplus will be used for salaries during the ensuing year. For 1880–81 there was a deficit of $2,160.30.

The gross income from the Bussey stores has largely increased since last year, but heavy expenses have been incurred for repairs, leaving the gain of net income only a little over $2,000. For the year 1882–83 the net income is not likely to be much larger than during the past year, as considerable outlay for repairs must be made from the year's income.

During the year the name of the Graduates' Scholarship has been changed to that of the "Rogers Scholarship," in honor of Henry Bromfield Rogers, of the class of 1822, who founded the scholarship in the year 1869, and who now consents that his name be attached thereto; and the name of the Senior Exhibition has been changed to that of the "Palfrey Exhibition," in memory of the late John G. Palfrey, who founded the Exhibition in the year 1821. The name of the Massachusetts Fund for the Botanic Garden has been changed to that of the "Lowell Fund for a Botanic Garden," in honor of the late Judge Lowell, who mainly procured the original subscriptions, and in accordance with a provision made by the subscribers to the Fund for a change of its name under certain circumstances.

Gifts have been received during the year as follows:—

TO FORM NEW FUNDS OR INCREASE OLD ONES.

From Edward Russell, Esq., $125, to increase the scholarship founded by him.

From the administrator of Miss Martha C. Derby, $5000, to found a scholarship in the University.

From an anonymous friend, $90,000, as the foundation of a new professorship in the Law School.

From the executors of John Amory Lowell, $20,000, to be added to the Massachusetts Fund for the Botanic Garden; and $20,000, "three quarters of the income of which shall from time to time be applied to the purchase of books for the Library, and the other one quarter be added yearly to the principal."

From the executors of Charles Sumner, $17.20, as a final payment on account of the Sumner Book Fund.

Subscriptions for the increase of the Botanic Garden Fund, paid to Sept. 1, 1882, from

Alexander Agassiz,	$1000,	H. H. Hunnewell,	$1000.

Subscriptions for the endowment of a Physical Laboratory, paid to Sept. 1, 1882, from

A friend	$2000	Alex. Cochrane	$500
A. Agassiz	5000	Wm. H. Forbes	1000
Sidney Bartlett	5000	H. P. Kidder	2000
Francis Blake	1000	Arthur T. Lyman	500
Walter C. Cabot	1000	Theodore Lyman	500
Geo. C. Clark	1000	J. A. Rumrill	1000
Louis C. Clark	1000	P. H. Sears	500

$22,000

Subscriptions for the further endowment of the Divinity School, paid to Sept. 1, 1882, from

Abbot, Prof. Ezra	$100.	Gilman, Rev. N. P.	$10.
Allen, Rev. Joseph H.	40.	Lee, Henry	300.
Barrows, Rev. S. J.	33.34	Leonard, Rev. George	25.
Bixby, Rev. James T.	33.33	Lippitt, Henry	100.
Bowditch, J. Ingersoll	200.	Lombard, Rev. Charles P.	5.
Brown, Rev. H. W.	10.	Muzzey, Rev. A. B.	100.
Eliot, Charles W.	100.	Osgood, Rev. E. Q. S.	5.
Everett, Prof. C. C.	100.	Thayer, Rev. George A.	50.
Fish, Rev. William H.	10.	Toy, Prof. C. H.	400.

$1,621.67

Subscriptions to establish a fund of which the income shall be used for the purchase of books for the Law School, paid to Sept. 1, 1882, from

A senior member of the Bar	$5000	Lowell, A. L.	50
Beaman, C. C., Jr.	250	Lowell, F. C.	25
Belmont, August	500	Lowell, John	1000
Bonaparte, Charles J.	500	Morse, Godfrey	25
Brown, Addison	500	Morse, John T.	200
Cadwalader, J. L.	50	Morse, R. M., Jr.	25
Carter, James C.	500	Myers, James J.	$25
Choate, Charles F.	500	Nickerson, George A.	500
Choate, Joseph H.	500	Norcross, Grenville H.	100
Coolidge, D. H.	100	Norcross, Otis	200
Coolidge, J. Randolph	250	Norcross, Otis, Jr.	100
Crocker, U. H.	100	Palfrey, F. W.	50
Dexter, W. S.	100	Parker, F. E.	100
Endicott, William, Jr.	1000	Parkman, Henry	50
Fox, Austin G.	100	Pierce, Henry L.	250
Gardiner, William H.	500	Pratt, Edward E.	100
Gray, Russell	100	Prichard, William M.	250
Hayes, Francis B.	500	Putnam, George	500
Holmes, Artemas H.	100	Putnam, Henry W.	100
Hubbard, C. E.	25	Roberts, George L.	100
Keasbey, E. Q.	5	Ropes, John C.	100
Kimball, David P.	250	Russell, William G.	1000
Lilienthal, estate of Rev. Dr. Max	500	Salisbury, Stephen	500
Loring, C. W.	250	Sargent, J. O.	500

(Continued.)

Subscriptions for the Law School Book Fund (continued):

Sears, P. H.	500	Villard, Henry	5000
Shattuck, Geo. O.	1000	Wharton, W. F.	25
Storrow, James J.	50	Wigglesworth, George	100
Thayer, E. V. R.	100	Wolcott, J. Huntington	200
Thorndike, S. L.	100	Wolcott, Roger	100
Vaughan, William W.	25		
			$25,230

Subscriptions to be applied towards a fund for the endowment of the Dental School, paid to Sept. 1, 1882, from

Dr. George H. Ames	$20	Dr. George F. Grant	$20
Dr. F. E. Banfield	50	Dr. A. B. Jewell	20
Dr. A. G. Bouvé	20	Arthur T. Lyman	100
Dr. C. A. Brackett	100	Dr. H. C. Meriam	20
Dr. E. P. Bradbury	20	Dr. F. A. Merrill	20
Dr. E. C. Briggs	20	Dr. L. D. Shepard	20
Dr. T. H. Chandler	20	Dr. E. H. Smith	20
Dr. E. E. Frost	20	Dr. J. G. W. Werner	20
			$510

The sum of $5 received last year from Dr. S. S. Silva and entered as a gift for current use has since been transferred to this endowment fund for the Dental School.

GIFTS FOR IMMEDIATE USE.

From an anonymous friend $135,000 has been received for the erection of a new building for the Law School.

From Robert N. Toppan, Esq., $150, to be used as a prize to be awarded in 1882–83 on Political Science in the graduate department of the University.

From George W. Wales, Esq., $200, for books for the Library, in continuance of former gifts for the same purpose.

Subscriptions for the current expenses of the Observatory, paid to Sept. 1, 1882, from

Adams, Charles Francis	$100	Fay, R. S.	50
Ames, Fred. L.	100	Forbes, Mrs. J. M.	200
Beal, James H.	50	Forbes, J. M.	100
Bremer, John L.	100	Gardner, George	100
Brimmer, Martin	100	Gardner, John L.	100
Cabot, Walter C.	50	Grew, Henry S.	50
Choate, Charles F.	100	Hemenway, Mrs. A.	100
Coolidge, T. Jefferson	100	Higginson, George	100
Curtis, Charles P.	100	Hooper, Mrs. S.	100
Dalton, Charles H.	50	Hunnewell, H. H.	$100
Davis, James	200	Lodge, Mrs. Anna C.	50

(Continued.)

Subscriptions for the Observatory (continued) : —

Lowell, Augustus	50
Norcross, Otis	100
Paine, Charles J.	50
Payson, Samuel R.	50
Pickering, E. C.	200
Phillips, John C.	100
Robbins, R. E.	50
Sears, Mrs. David	100
Sears, F. R.	50
Shattuck, G. O.	50
Shaw, Mrs. Cora L.	30
Thayer, Nathaniel	100
Upham, George P.	50
Weld, W. G.	50
Wheelwright, A. C.	50
Wigglesworth, Misses	100
Winthrop, Robert C.	50
	$3,330

Subscriptions to aid in publishing the University Bulletin, paid to Sept. 1, 1882, from

A. Agassiz	$50
Charles P. Curtis	200
Henry Lee	50
C. S. Sargent	$50
W. B. Weeden	100
	$450

From an anonymous friend, $500, to increase the salary of the Professor of Entomology.

From the Dante Society, $50, for the purchase of books on Dante.

From R. H. McDonald, Esq., $20, for the purchase of books for the French department.

Final subscriptions for Chinese Instruction, paid to Sept. 1, 1882, from

Martin Brimmer	$333.34
D. O. Clark	166.67
George B. Dixwell	333.
E. R. Mudge	$333.33
George C. Richardson	333.34
	$1,499.68

For lectures on Political Economy, through William Gray, Esq., Treas., $300.

Subscriptions towards the fund for the new building for the Medical School, paid to Sept. 1, 1882, from

Ames, Frederick L.	$10,000
Blake, Arthur W.	1000
Bradlee, Frederick H.	100
Burnett, Joseph	200
Burnham, John A.	1000
Chickering, George H.	100
Cummings, John	500
Greenleaf, R. C.	1000
Hamlen, Nathaniel P.	100
Head, Charles	100
Hogg, Brown & Taylor	200
Lyman, Arthur T.	500
Lyman, Theodore	250
Parker, H. D.	500
Simmons, G. W.	50
	$15,600

The total amount of these gifts for immediate use is $157,099.68, as is also stated on page 14 of this report.

OTHER GIFTS.

From John Hargreaves, Esquire, of Liverpool, a picture by "Old Crome" framed in oak from a tree associated with the English ancestors of the Boston Mathers.

From the committee of arrangements for the Greek play, a grand piano.

From the executors of Charles Sumner a deed of an undivided half interest in one hundred and sixty acres of land in Wisconsin, having at present no market value.

During the year the College became entitled, under the will of the late George B. Dorr, of Boston, to property exceeding one hundred thousand dollars in value, bequeathed "for the benefit of the general funds of said College," without any restriction whatever; but as no part of this property came into the actual possession of the College until after the close of the financial year, the formal acknowledgment therefor will be made in the next Annual Report.

EDWARD W. HOOPER,
Treasurer.

BOSTON, Dec. 26, 1882.

ACCOUNTS.

1881-82.

General Statement of Receipts and Disbursements for the year ending

INCOME.

Interest on notes, mortgages, and advances, ...		$55,879.49
" " Massachusetts 5% Bonds, ...		2,753.54
" " Policy Mass. Hospital Life Insurance Co., ...		200.00
" " New Boston Coal Mining Co. Bond, ...		700.00
" " Railroad Bonds (after deductions for sinking premiums).		
Atchison, Topeka, & St. Fe, 7%, ...	$12,612.27	
Buffalo, Bradford & Pittsburg, ...	4,200.00	
Burlington & Mo. River in Iowa, 7%, . .	3,229.29	
" " " in Nebraska, 6%,	14,845.01	
Chicago, Burlington & Quincy, 4%, . . .	17.64	
Marion & McPherson. 1st Mortg., 7%, .	77.78	
Ionia & Lansing, 1st Mortg., 8%, ...	8,736.84	
Marq., Hough. & Onton., 6%, ...	478.67	
Kan. City, St. Joseph & Council Bluffs, 7%,	3,000.00	
Kansas City, Topeka, & Western, 7%, .	4,900.78	
Michigan Southern & Northern Indiana,	70.00	
Nebraska, 7%, ...	4,988.88	
New York Central, 6%, ...	1,680.00	
Lincoln & No. Western, 7%, ...	3,250.23	
		62,087.39
" " Municipal Bonds.		
Cincinnati, ...	140.00	
Minneapolis, ...	160.00	
		300.00
Dividends on Stocks.		
Charles River National Bank, ...	480.00	
First (Cambridge) " "	400.00	
Fitchburg " "	192.00	
Massachusetts " "	144.00	
Merchants " "	1,584.00	
New England " "	222.00	
Old Boston " "	500.00	
Schenectady " " (N. Y.),	200.00	
Bank taxes refunded, ...	1,026.07	
		4,748.07
Amoskeag Manufacturing Co., ...	1,920.00	
Amory " "	216.00	
Massachusetts " "	560.00	
Merrimack " "	1,700.00	
Nashua " "	1,440.00	
Pacific Mills " "	1,000.00	
Stark Mills " "	1,080.00	
Wamsutta " "	640.00	
New Bedford Copper "	15.00	
		8,571.00
Chicago, Burlington & Quincy R. R., . .	2,980.00	
Pittsfield & North Adams Railroad, . .	315.00	
Quincy Railroad Bridge Company, . . .	100.00	
Pittsburg, Ft. Wayne, & Chicago R. R., .	350.00	
		3,745.00
Amount carried forward, ...		$138,984.49

by the Treasurer of Harvard College,
August 31, 1882.

EXPENSES.

Paid to account of Expenses in the

University, as per Table I. (page 32),		$30,644.41
College, " " II. (page 34).		
Salaries for instruction,	$137,059.27	
Repairs,	4,743.93	
Insurance on College Edifices, not valued on Treasurer's books,	10.76	
General Expenses,	39,269.63	
Scholarships,	25,473.31	
Beneficiaries,	3,236.83	
Prizes for Reading, &c.,	1,309.81	
Botanic Garden,	5,468.03	
Herbarium,	1,138.64	
Gymnasium,	6,272.02	
		223,982.23
Library, as per Table III. (page 39).		
Books,	10,650.71	
Salaries and other expenses,	20,137.21	
		30,787.92
Divinity School, as per Table IV. (page 40).		
Salaries and other expenses,	19,677.29	
Scholarships and Beneficiaries,	1,083.33	
		20,760.62
Law School, as per Table V. (page 42),		41,036.79
Medical School, as per Table VI. (page 43),		131,375.30
Dental School, as per Table VII. (page 44),		3,665.41
Lawrence Scientific School, as per Table VIII. (page 45).		
Salaries and other expenses,	20,735.89	
Museum of Comparative Zoölogy,	22,181.46	
		42,917.35
Observatory, as per Table IX. (page 46),		16,861.34
Bussey Institution, as per Table X. (page 46),	5,120.71	
Bussey Building Fund, as per Table X. (page 46),	6,509.10	
Arnold Arboretum, as per Table X. (page 46),	801.72	
		12,431.53
Amount carried forward		$554,462.90

General Statement of Receipts and Disbursements for the year ending

INCOME.

Amount brought forward, . .		$138,984.49
Real Estate, from rents, &c. (gross receipts).		
Cambridge (Houses and Lands), ...	36,465.56	
Boston (general investments), ...	72,878.11	
Bussey stores, ...	33,518.97	
Sundry estates, ...	7,720.17	
		150,582.81
Term Bills.		
College, as per Table II., ...	162,983.04	
Divinity School, as per Table IV., ...	2,949.12	
Law School, as per Table V., ...	22,550.00	
Medical School, as per Table VI., ...	51,415.54	
Dental School, as per Table VII., ...	4,000.00	
Lawrence Scientific School, as per Table VIII., .	4,985.00	
Bussey Institution, as per Table X., ...	410.00	
		249,292.70
Sundries.		
From Wm. Pennoyer Annuity, ...	277.50	
Trustees of Thayer Scholarships, ...	3,600.00	
" Count Rumford's Legacy, . . .	579.37	
" Edward Hopkins, ...	235.19	
Pew rents in Appleton Chapel, ...	174.00	
For use of Library by resident graduates and others,	200.00	
Degree of S.D., ...	60.00	
Final dividend from Manchester Print Works, . .	2.40	
Degree of Bachelor of Arts out of course, and Examination fees, ...	632.50	
Fees in Infirmary and Laboratory, Dental School, .	741.07	
Printing by College Press for other Departments, .	955.25	
Sales of grass and old material, ...	224.20	
Sales of old examination papers, ...	102.55	
Sale of time signals from Observatory, ...	2,850.00	
Sale of tickets to Commencement Dinner of 1882, .	509.00	
Sale of books, pamphlets, catalogues, &c., ...	205.56	
Divinity School balance of appropriation for books repaid, ...	124.37	
Use of lockers at Gymnasium, ...	1,304.00	
Returned by Beneficiaries, ...	832.35	
Fee for instruction in Chinese, ...	3.00	
Fees for use of Gymnasium, ...	20.00	
Repayment of advances for books from Subscription of 1880, ...	59.61	
Proportion of expenses of Bursar's office repaid by other Departments, ...	438.02	
Proportion of expenses of Gymnasium repaid by other Departments, ...	973.84	
		15,103.78
Sundry gifts for immediate use, see page 9, ...		157,099.68
Amount carried forward, . . .		$711,063.46

by the Treasurer of Harvard College,
August 31, 1882.

EXPENSES.

Amount brought forward, ...			$554,462.90
Real Estate, expenses.			
Insurance.			
Cambridge, ...	$15.00		
Boston, ...	1,015.00		
Bussey stores, ...	1,039.73		
		2,069.73	
Taxes.			
Cambridge, ...	1,993.73		
Boston, ...	11,452.21		
Bussey stores, &c., ...	7,019.09		
		20,465.03	
Interest.			
Cambridge (on advances), ...	420.00		
Bussey stores (on advances), . . .	2,028.31		
		2,448.31	
Repairs, improvements, care, cleaning and sundries.			
Cambridge, ...	10,063.02		
Boston, ...	7,095.71		
Bussey stores, ...	5,518.78		
		22,677.51	
Heating and hoisting for Bussey stores,	4,012.94		
Less for sales of heat and power, .	2,270.00		
		1,742.94	
			49,403.52
Annuities.			
Bussey, ...		6,800.00	
Gore, ...		900.00	
Mary Osgood, ...		360.00	
Lucy Osgood, ...		780.00	
Class of 1802, ...		120.00	
Anonymous, ...		720.00	
Bemis, ...		2,752.50	
			12,432.50
Sundry payments from income.			
To the Treasurer of the Museum of Fine Arts, from Gray Fund for Engravings, ...		650.00	
For freight on engravings from income of Gray Fund for Engravings, ...		3.28	
The income of the Daniel Williams Fund for the benefit of the Herring Pond and Mashpee Indians,		948.94	
The income of the Sarah Winslow Fund, to the Minister and Teacher at Tyngsboro', Mass., . .		252.88	
Expenses on account of Chinese Instruction, . . .		4,082.81	
For lectures on Political Economy, ...		300.00	
			6,237.91
Amount carried forward, ...			$622,536.83

General Statement of Receipts and Disbursements for the year ending

RECEIPTS EXCLUSIVE OF INCOME.

Amount brought forward, ...		$711,063.46
GIFTS.		
Edward Russell Scholarship (additional), ...	125.00	
George and Martha Derby Scholarship, ...	5,000.00	
Lowell Fund for a Botanic Garden, ...	20,000.00	
" Book Fund, ...	20,000.00	
Charles Sumner Book Fund (additional), ...	17.20	
New Professorship of Law, ...	90,000.00	
Subscriptions to Law School Book Fund, ...	25,230.00	
" for endowment of Botanic Garden, . . .	2,000.00	
" " " " Physical Laboratory, .	22,000.00	
" " " " Divinity School, . . .	1,621.67	
" " " " Dental School, ...	510.00	
		186,503.87
SALES.		
$70,000 Massachusetts 5% Bonds, ...	81,275.00	
100,000 Nebraska R. R. 7% " (guaranteed) . .	118.500.00	
76,000 Burl. & Mo. Riv. (Iowa) R. R. L. G. 7% Bonds,	89,680.00	
8,000 " " " " (Neb.) " 6% called bds., paid off,	8,000.00	
41,000 Atch., Topeka, & St. Fe R. R. 7% Bonds, .	48,387.50	
5,000 Chicago, Burl. & Quincy R. R. 4% Bonds, .	4,175.00	
10 rights to Chicago, Burl. & Quincy R. R. stock,	157.75	
		350,175.25
SUNDRIES.		
From Dining Hall Association, to reduce debt, . . .	1,000.00	
Insurance for fire in Milk St. store, ...	101.50	
Dental School for Dr. Silva's subscription last year,	5.00	
		1,106.50
Advances to premiums on railroad bonds repaid, from $334,000 seven per cent bonds, ...		3,340.00
Advances to accrued interest on bonds repaid, ...		5,622.19
" " College Wharf repaid, ...		411.88
Balance, September 1, 1881.		
Cash in Suffolk National Bank, ...	19,063.38	
Cash in hands of Allen Danforth, Bursar, ...	1,131.61	
Term Bills due October, 1880, ...	71,163.80	
" " over due, ...	2,259.56	
		93,618.35
		$1,351,841.50

by the Treasurer of Harvard College,
August 31, 1882.

EXPENSES.

Total of expenses brought forward, ...	$622,536.83

INVESTMENTS AND SUNDRY PAYMENTS.

Burl. & Mo. River (Iowa) R. R. L. G. 7%,	$4,000	cost,	$4,660.00	
" " " " (Neb.) " 6% Bonds,	20,000	"	20,761.25	
Atch., Top. & St. Fe R. R. 7% 1st mort. Bds.	20,000	"	23,800.00	
Ionia & Lansing " 8% " " "	18,000	"	20,335.00	
Kan. City, Top. & W. " 7% " " "	40,000	"	48,065.00	
Marion & McPherson " 7% " " "	150,000	"	169,050.00	
Marq., Hough. & Ont. " 6% " " "	23.000	"	23,942.50	
Linc. & No. Western " 7% " " "	22,000	"	25,750.00	
Mass. 5% Bonds, 1894 (Paine Fund), .	1,500	"	1,755.00	
Chicago, Burl. & Quincy R. R. 4% Bonds }	5,000	"	4,175.00	
50 shares Chic., Burl. & Quincy R. R. Co. }		"	825.00	
500 " " " " " "		"	64,894.46	
91 " " " " " " new		"	9,100.00	
				417,113.21
Paid for accrued interest on above bonds, ...				5,519.31
Invested in Notes and Mortgages, ...			1,400,000.00	
Less Notes and Mortgages paid off, ...			1,186,527.68	
				213,472.32
Paid Baring Brothers & Co. in account, ...			10,708.89	
Less drafts on Baring Brothers & Co., ...			10,347.22	
				361.67
Paid on account of improvements to Gray Estate, ...				450.00
" " " " " " Gore Hall, ...				483.05
" " " " " " Sever "				465.31
" " " " fire in Milk St. store, ...				101.50
" " " " advances to Geological Dept.				.25
" " " " Mr. Agassiz's note from income of Memorial Fd.,				4,652.06

Balance, August 31, 1882.		
Cash in Suffolk National Bank, ...	9,211.25	
Cash in hands of Allen Danforth, Bursar, ...	5,090.99	
Term Bills due October, 1882, ...	70,016.74	
" " overdue, ...	2,367.01	
		86,685.99
		$1,351,841.50

The following Account exhibits the State of the Property, as embraced in the Treasurer's Books, August 31, 1882.

Notes and Mortgages.				
Mortgages			$446,603.74	
Long Wharf Co.'s Notes			60,000.00	
Chic., Burl'n & Quincy R. R. Notes			100,000.00	
Manufacturing Co.'s Notes			260,000.00	
Personal Notes for Agassiz Memorial Fund			25,006.69	
Personal Note for new professorship in Law School			90,000.00	
				$981,610.43
Massachusetts 5% Bonds,	$22,500	valued at		25,805.00
New Boston Coal Mining Co. Bonds,	10,000	" "		9,000.00
Municipal Bonds.				
Cincinnati,	2,000.00	valued at	2,000.00	
Minneapolis,	2,000.00	" "	2,000.00	
				4,000.00
Railroad Bonds.				
Burl. & Mo. R. in Nebr. non ex. 6%,	259,000	val'd at	264,173.50	
Kan. City, St. Jos. & C.B. 1st M., 7%,	50,000	" "	50,000.00	
Lincoln & No. West., 1st M., 7%,	57,000	" "	57,000.00	
Atch., Top., & St. Fé, 1st M., 7%,	185,000	" "	185,000.00	
Kan. City, Top., & West., 1st M. 7%,	104,000	" "	104,000.00	
Marion & McPherson, 1st M., 7%,	150,000	" "	150,000.00	
Ionia & Lansing, 1st Mortg., 8%,	121,000	" "	117,617.50	
New York Central, 6%,	28,000	" "	27,000.00	
Marqu., Hough. & Onton., 6%,	23,000	" "	23,942.50	
Buffalo, Bradford, and Pittsb., 7%,	60,000	" "	60,000.00	
Michigan So. and No. Indiana, 7%,	1,000	" "	1,000.00	
Railroad Bond Premiums,			79,152.35	
				1,118,885.85
Railroad Stock.				
Chicago, Burlington, and Quincy,	1,001	shares,	99,261.93	
Pittsburgh, Fort Wayne and Chicago,	50	"	5,000.00	
Pittsfield and North Adams,	63	"	6,300.00	
Quincy R. R. Bridge Co.,	10	"	1,250.00	
				111,811.93
Manufacturing Stock.				
Amory,	36	shares,	3,600.00	
Amoskeag,	12	"	10,800.00	
Massachusetts Mills,	7	"	6,600.00	
Merrimack,	17	shares,	17,000.00	
Nashua,	36	"	25,560.00	
New Bedford Copper Co.,	5	"	250.00	
Pacific Mills,	20	"	17,468.29	
Stark Mills,	12	"	11,900.00	
Wamsutta Mills,	80	"	8,880.00	
				102,058.29
Amount carried forward,				$2,353,171.50

Amount brought forward, ...			$2,353,171.50
Bank Stock.			
Charles River, ...	60 shares,	6,000.00	
First Cambridge, ...	50 "	5,000.00	
Fitchburg, ...	24 "	2,403.00	
Massachusetts, ...	12 "	3,000.00	
Merchants, ...	264 "	34,732.00	
New England, ...	37 "	3,896.00	
Old Boston, ...	200 "	8,933.00	
Schenectady (N. Y.), ...	40 "	2,200.00	
			66,164.00
Real Estate.			
Houses and Lands in Cambridge yielding income,		357,163.83	
Unimproved Lands in Cambridge, ...		75,487.79	
Bussey Real Estate in Boston and Dedham, . .		413,092.80	
Amory Estate, Franklin Street, Boston, . . .		165,615.81	
Webb Estate, Washington Street, Boston, . .		164,604.79	
Andrews Estate, Washington Street, Boston, .		165,562.00	
Gray Estate, Washington Street, Boston, . . .		475,450.00	
Estate on Hawley Street, Boston, ...		38,650.78	
Estate on Hawkins Street, "		29,476.09	
Ward's (Bumkin) Island, Boston Harbor, . .		1,200.00	
Reversion of Buildings on Brattle Street, Boston,		1,000.00	
			1,887,303.89
Sundries.			
In hands of Count Rumford's Trustees in Paris,		10,000.00	
Annuity of William Pennoyer, valued at . . .		4,444.44	
Policy of the Mass. Hospital Life Insurance Co.,		5,000.00	
Due from Dining Hall Association, ...		36,232.16	
" " Lawrence Scientific School, ...		4,707.27	
" " Bussey Trust, ...		40,566.13	
" " Dental School, ...		14,488.37	
Advances to Scudder's Catalogue, ...		208.86	
" " Books, ...		29.36	
Balance of account for decorating Appleton Chapel,		2,859.62	
Term bills due October, 1882, ...		70,016.74	
" " overdue, ...		2,367.01	
			190,919.96
Cash in Suffolk National Bank, ...		9,211.25	
" " hands of Allen Danforth, Bursar, ...		5,090.99	14,302.24
		Total	$4,511,861.59

The foregoing Property represents the following Funds and Balances, and is answerable for the same.

UNIVERSITY FUNDS.

Principal, Sept. 1, 1881.		Principal, Aug. 31, 1882.	
$99,700.89	Stock Account (so called), ...	$84,962.25	
141,638.74	Insurance and Guaranty Fund (so called),	141,638.74	
5,250.00	Samuel D. Bradford Fund, ...	5,250.00	
15,750.00	Israel Munson Fund, ...	15,750.00	
16,871.63	Leonard Jarvis Fund, ...	16,871.63	
1,250.44	Peter C. Brooks Fund for building a President's House, ...	1,242.38	
155.35	Thomas Cotton Fund, ...	155.73	
57,596.48	John Parker Fellowships, ...	57,233.40	
10,540.71	Harris Fellowships, ...	10,865.70	
11,947.88	John Thornton Kirkland Fellowship,	12,244.36	
9,999.83	James Walker Fellowship, ...	10,311.83	
27,810.78	Rogers Scholarship, ...	28,773.76	
1,598.53	Sumner Prize Fund, ...	1,688.39	
9,000.00	Sever Fund (unrestricted)	9,000.00	
21,785.76	Retiring Allowance Fund, ...	23,010.13	
150.00	Robert N. Toppan Prizes	300.00	
25,000.00	John C. Gray Fund, ...	25,000.00	
			444,298.30
	COLLEGE FUNDS.		
27,748.64	Alford Professorship, ...	27,748.64	
28,337.40	Boylston "	28,337.40	
21,619.50	Eliot "	21,619.50	
10,000.00	" " (Jon. Phillips's gift),	10,000.00	
3,500.01	Erving "	3,500.01	
35,990.99	Fisher "	35,990.99	
20,217.08	Hersey "	20,217.08	
17,587.39	" " (Thomas Lee's gift),	18,575.78	
3,747.33	Hollis " (Mathematics), . .	3,747.33	
32,609.33	Hollis " (Divinity), . . .	34,441.96	
43,062.93	McLean "	43,062.93	
21,000.00	Perkins "	21,000.00	
25,020.19	Plummer "	25,020.19	
52,500.00	Pope "	52,500.00	
52,996.37	Rumford "	52,996.37	
23,139.83	Smith "	23,139.83	
16,240.38	Fund for Permanent Tutors, ...	16,240.38	
125,000.00	Class Subscription Fund, ...	125,000.00	
12,698.04	Daniel H. Peirce "	12,766.91	
1,923.63	Paul Dudley Fund for Lectures, . .	2,031.76	
31,500.00	Jonathan Phillips Fund (unrestricted)	31,500.00	
$1,062,486.06	. . . . . . Amounts carried forward,	$609,437.06	444,298.30

Principal, Sept. 1, 1881.		Principal, Aug. 31, 1882.	
$1,062,486.06	Amounts brought forward,	$609,437.06	444,298.80
1,050.00	**John A. Blanchard** Fd. (unrestricted)	1,050.00	
3,234.59	**John W. P. Abbot** " "	3,416.40	
5,600.00	**Daniel Austin** " "	5,600.00	
345.30	**Henry Flynt's** Bequest,	346.16	
2,556.40	**Abbot** Scholarship,	2,550.05	
791.27	**Alford** "	795.72	
5,100.50	**Bartlett** "	5,137.18	
5,549.99	**Bassett** "	5,425.24	
11,840.64	**Bigelow** "	11,756.10	
94,399.69	**Bowditch** "	106,332.71	
	Bright " (balance)	570.17	
2,739.17	**Browne** "	2,743.10	
7,116.47	**Class of 1802** Scholarship,	7,146.39	
3,123.80	" **1814** "	3,099.37	
4,980.18	" **1815** " (**Kirkland**),	5,010.06	
3,738.24	" **1817** "	3,748.32	
2,635.98	" **1835** "	2,634.12	
3,706.61	" **1841** "	3,739.94	
2,838.33	" **1852** " (**Dana**)	2,997.83	
6,308.86	**Crowninshield** "	6,663.48	
	Derby " (George & Martha)	5,199.06	
5,350.93	**W. S. Eliot** "	5,351.66	
2,445.83	**Greene** "	2,463.30	
6,054.14	**Hodges** "	6,394.37	
5,998.72	**Farrar** "	5,985.86	
5,202.44	**Levina Hoar** "	5,294.79	
4,840.61	**Hollis** "	4,862.67	
100.71	**Matthews** " (balance),	530.88	
7,748.78	**Morey** "	7,684.27	
6,576.85	**Pennoyer** "	6,594.17	
513.04	**Edward Russell** "	673.90	
3,845.79	**Saltonstall** " (Mary & Leverett),	3,861.94	
603.98	" " (Dorothy),	637.92	
5,322.24	**Slade** "	5,371.34	
3,172.67	**Sever** "	3,175.99	
9,392.02	**Sewall** "	9,419.85	
43,099.32	**Shattuck** "	43,721.48	
2,754.06	**Story** "	2,758.83	
4,163.24	**Gorham Thomas** "	4,147.20	
6,497.86	**Toppan** "	6,563.05	
25,183.05	**Townsend** "	25,045.52	
3,888.95	**Walcott** "	3,907.51	
8,191.89	**Whiting** "	8,652.28	
12,064.95	Exhibitions,	11,899.16	
1,764.40	Palfrey Exhibition,	1,773.54	
1,200.00	**Samuel Ward** Fund,	1,200.00	
1,006.26	**John Glover** Fund,	1,062.80	
2,147.04	**Rebecca A. Perkins** Fund,	2,267.70	
10,923.08	**Quincy Tufts** Fund,	10,961.35	
5,256.81	**Day** "	5,292.25	
10,226.39	**Munroe** "	10,216.31	
$1,435,628.33	Amounts carried forward,	$1,008,170.80	444.298.80

Principal, Sept. 1, 1881.		Principal, Aug. 31, 1882.	
$1,485,628.38	. . Amounts brought forward, .	$1,003,170.30	444,298.30
15,899.06	**Lee Prizes for Reading,**	15,692.58	
4,348.53	**Boylston Prizes for Elocution,**	4,337.94	
11,693.03	**Bowdoin Prizes for Dissertations,**	11,925.18	
1.030.91	**Hopkins Gift for "Deturs,"**	994.23	
52,127.57	Botanic Garden Fund,	54,255.77	
15,882.31	**Lowell Fund for a Botanic Garden,**	35,882.31	
18,192.57	Herbarium Fund,	18,100.42	
125.00	Salary account (unexpended balance),	125.00	
7,413.46	Physical Laboratory,	29,956.58	
			1,174,440.31
	LIBRARY FUNDS.		
10,965.37	Subscription for Library,	11,287.47	
2,100.50	**Bowditch Fund,**	2,140.40	
1,516.34	**Bright** "	2,620.11	
5,574.63	**Denny** "	5,701.33	
5,296.52	**Farrar** "	5,303.00	
3,343.83	**Haven** "	3,515.70	
5,563.56	**Hayward** "	5,755.36	
2,414.81	**Hollis** "	2,458.71	
2,105.21	**Homer** "	2,079.52	
5,681.55	**Lane** "	5,797.68	
	Lowell "	20,469.98	
61,044.49	**Minot** "	61,232.01	
5,307.31	**Salisbury** "	5,188.81	
20,239.27	**Sever** "	20,538.32	
4,247.32	**Shapleigh** "	4,455.24	
38,264.15	**Sumner** "	38,310.43	
5,031.18	**Tucker** "	5,018.29	
5,708.75	**Ward** "	6,014.71	
124.67	**Wales** "	178.59	
16,292.28	**Walker** "	16,489.87	
94.16	Sundry gifts, etc. (unexpended balances),	158.06	
			224,718.59
	LAW SCHOOL FUNDS.		
8,062.09	Law School (balance),	8,426.35	
15,750.00	**Dane Professorship,**	15,750,00	
23,979.82	**Bussey** "	23,979.82	
8,840.81	**Royall** "	8,340.81	
	New "	90,000.00	
	Law School Book Fund,	25,230.00	
	" " Building Fhnd,	125,139.80	
			296,866.78
	MEDICAL SCHOOL FUNDS.		
59,469.01	Medical School (balance),	67,312.93	
19,192.65	**Jackson Medical Fund,**	19,192.65	
17,129.20	**Geo. C. Shattuck Fund,**	17,129.20	
11,497.76	**Warren Fund for Anatom'l Museum,**	12,031.53	
3,916.51	**Boylston Fund for Medical Prizes,**	3,787.65	
2,159.08	" " " " **Books,**	2,280.42	
2,489.91	Medical Library Fund,	2,624.85	
161,771.40	Medical School Building Fund,	101,420.32	
2,000.00	**Quincy Tufts** Medical Fund,	2,000.00	
765.06	**Edward M. Barringer** Fund,	808.05	
			228,587.60
$2,099,779.97	. . . . . Amounts carried forward, ...		$2,368,906.58

Principal, Sept. 1, 1881.		Principal, Aug. 31, 1882.	
$2,099,779.97	Amounts brought forward,		$2,368,906.58
	DIVINITY SCHOOL FUNDS.		
20,666.76	General Fund,	23,486.17	
37,583.74	**Bussey** Professorship,	37,583.74	
16,015.81	**Parkman** "	16,015.81	
6,008.43	**Hancock** "	6,008.43	
43,845.73	**Winn** Prof. of Ecclesiastical History,	44,345.73	
20,280.38	**Dexter** Lectureship,	20,280.38	
9,184.69	**Henry Lienow Fund,**	9,184.69	
5,250.00	**Mary P. Townsend Fund,**	5,250.00	
2,100.00	**Winthrop Ward** Fund,	2,100.00	
1,050.00	**Samuel Hoar** "	1,050.00	
1,050.00	**Abraham W. Fuller Fund,**	1,050.00	
1,050.00	**Caroline Merriam** "	1,050.00	
12,925.74	**Jackson** Foundation,	13,012.18	
2,177.95	**Joshua Clapp** Fund,	2,177.95	
1,050.00	**William Pomeroy** Fund,	1,050.00	
525.00	**Hannah C. Andrews** Fund,	525.00	
3,149.62	**J. Henry Kendall** Scholarship,	3,326.65	
2,832.54	**Nancy Kendall** "	2,898.42	
911.34	**Lewis Gould** Fund	911.34	
747.50	**Adams Ayer** "	789.54	
7,875.00	**Joseph Baker** "	7,875.00	
5,304.07	**Thomas Cary** Scholarships,	5,252.15	
2,196.50	**George Chapman** Scholarship,	2,319.97	
2,993.09	**Joshua Clapp** "	3,161.30	
1,586.61	Beneficiary money returned	1,675.80	
40,000.00	**Th. Tileston** of New York Endowm't	40,000.00	
10,000.00	**Henry P. Kidder** Fund,	10,000.00	
1,000.00	**Abby Crocker Richmond Fund,**	1,000.00	
66,913.69	New Endowment,	68,535.36	
17,000.00	**Oliver Ames** Fund,	17,000.00	
800.00	**Daniel Austin** Fund,	800.00	
10,610.44	**Abner W. Buttrick** Fund,	11,206.72	
			360,922.33
	LAWRENCE SCIENTIFIC SCHOOL FUNDS.		
38,807.17	Professorship of Engineering,	38,807.17	
2,860.50	Professorship of Chemistry,	2,860.50	
61,536,43	**Abbott Lawrence** Fund,	61,536.43	
50,375.00	**James Lawrence** "	50,375.00	
30,686.85	**John B. Barringer** "	30,686.85	
100,516.65	**Sturgis Hooper** "	100,620.00	
50,000.00	**Gray** Fund for Zoölogical Museum,	50,000.00	
297,933.10	**Agassiz Memorial** Fund, }	297,933.10	
7,594.01	Teachers' and Pupils' Fund, }	7,594.01	
117,469.34	Permanent Fund,	117,469.34	
7,740.66	**Humboldt** Fund,	7,740.66	
			765,623.06
$3,219,984.31	Amounts carried forward,		$3,495,451.97

Principal, Sept. 1, 1881.		Principal, Aug. 31, 1882.	
$3,219,984.31	. . . . . **Amounts brought forward,**		$3,495,451.97

OBSERVATORY FUNDS.

110,293.88	**Edward B. Phillips** Fund, . . .	110,293.88	
21,000.00	**James Hayward** , " . . .	21,000.00	
21,826.88	**David Sears** " . . .	22,440.22	
12,161.96	**Josiah Quincy** " . . .	12,845.46	
2,000.00	**Charlotte Harris** " . . .	2,000.00	
10,000.00	Anonymous Observatory Fund (at present charged with an Annuity),	10,000.00	
6,654.65	Observatory Subscriptions (balance),	5,481.98	
			184,061.54

OTHER FUNDS FOR SPECIAL PURPOSES.

413,092.80	**Bussey** Trust (income thereof, ½ to Bussey Institution, ¼ to Law School, and ¼ to Divinity School), . . .	413,092.80	
50,540.17	**Bright** Legacy, ...	50,000.00	
24,858.54	**Robert Troup Paine** Fund, . . .	25,930.13	
	Bussey Institution, ...	805.55	
	Dental Subscription Fund, . . .	515.00	
3,684.15	**Bussey** Building Fund, ...	2,882.43	
151,248.31	**James Arnold** "	151,673.32	
7,937.76	**Arnold** Arboretum	9,949.91	
42,000.00	**James Savage** "	42,000.00	
15,692.86	**Gray** Fund for Engravings, . . .	15,941.58	
20,776.07	**Gore** Annuity Fund, ...	20,560.63	
7,311.66	**Mary Osgood** Annuity Fund, . .	7,362.59	
12,909.99	**Lucy Osgood** Annuity Fund, . .	12,855.53	
51.015.81	**Bemis** Annuity Fund, ...	51,073.31	
2,394.43	**Gospel Church** Fund, ...	2,528.97	
3,171.50	**John Foster** Fund (income to Divinity School, Law School, and Medical School, in turn), ...	3,171.50	
465.31	**Sever** Hall Building Fund, . . .		
1,479.43	Baring Bros. & Co. (balance due them),	1,117.76	
			811,460.96

FUNDS IN TRUST FOR PURPOSES NOT CONNECTED WITH THE COLLEGE.

16,095.39	**Daniel Williams** Fund for the conversion of the Indians, ...	16,050.99	
4,824.39	**Sarah Winslow** Fund, for the Minister and Teacher at Tyngsborough, Mass.,	4,836.13	
			20,887.12
$4,233,420.25			$4,511,861.59

Changes in the Funds during the year ending August 31, 1882.

Total amount of Funds, August 31, 1882, as before stated,	$4,511,861.59	
Total amount of Funds, September 1, 1881, as before stated,	4,233,420.25	
Showing a total increase during the year of		$278,441.34
Which is made up as follows: —		
Gifts forming new Funds or increasing old ones,	186,503.87	
Increase of Funds established during the year, and balances created during the year,	127,189.56	
Increase of specially invested Fund by gain from change of investment,	11,275.00	324,968.43
Deduct from this amount for		
Stock Account, this year's deficit charged off, being excess of expenditure over income of College, Library, and University accounts,	14,738.64	
Decrease more than increase of Funds and balances, which appear both at the beginning and end of the year,	30,840.09	
Gore Annuity Fund, part of principal spent,	483.05	
Sever Hall Fund, balance " "	465.31	46,527.09
		$278,441.34

Net increase of Funds, established during the year, as above,	127,189.56	
Increase of specially invested Fund,	11,275.00	138,464.56
Less deduction as above,		46,527.09
Leaving amount of the net increase of the Funds and balances, excluding gifts for capital account, as is also shown in the following table,		$91,937.47

Statement showing Changes in the Different

Increase of Funds which appear both at the beginning and the end of the year, being the excess of income (including gifts for immediate use) over payments towards the special objects of those Funds.

Thomas Cotton Fund,	.38
Harris Fellowship,	324.99
John Thornton Kirkland Fellowship,	296.48
James Walker Fellowship,	312.00
Rogers Scholarship,	962.98
Sumner Prize Fund,	89.86
Retiring Allowance Fund,	1,224.37
Robert N. Toppan Prizes,	150.00
Hersey Professorship (**Thomas Lee's** gift),	988.39
Hollis " (Divinity),	1,832.63
Daniel H. Peirce Fund,	68.87
Paul Dudley Fund for Lectures,	108.13
John W. P. Abbott Fund (unrestricted),	181.81
Henry Flynt's Bequest,	.86
Alford Scholarship,	4.45
Bartlett "	36.68
Bowditch "	658.02
Browne "	3.93
Class of 1802 Scholarship,	29.92
" **1815** "	29.88
" **1817** "	10.08
" **1841** "	33.83
" **1852** "	159.50
Crowninshield "	354.57
W. S. Eliot "	.73
Greene "	17.47
Hodges "	340.23
Levina Hoar "	92.35
Hollis "	22.06
Matthews "	430.17
Pennoyer "	17.32
Edward Russell "	35.86
Saltonstall " **(Dorothy)**,	33.94
" " **(Mary & Leverett)**,	16.15
Slade "	49.10
Sever "	3.32
Sewall "	27.83
Shattuck "	622.16
Story "	4.77
Toppan "	65.19
Walcott "	18.56
Whiting "	460.39
Palfrey Exhibition,	9.14
Amount carried forward,	**$10,128.85**

Funds during the year ending August 31, 1882.

Decrease of Funds, which appear both at the beginning and the end of the year, being the excess of payments over income received (including gifts for immediate use) for the special objects of those Funds.

Peter C. Brooks Fund,	$8.06	
John Parker Fellowships,	363.08	
Abbot Scholarship,	6.35	
Bassett "	124.75	
Bigelow "	84.54	
Class of 1814 Scholarship,	24.43	
" **1835** "	1.86	
Farrar "	12.86	
Morey "	64.51	
Gorham Thomas "	16.04	
Townsend "	87.53	
Exhibitions,	165.79	
Munroe Fund,	10.28	
Lee Prizes for Reading,	206.48	
Boylston Prizes for Elocution,	10.59	
Hopkins Gift for "Deturs,"	36.68	
Herbarium Fund,	92.15	
Homer Book "	25.69	
Salisbury " "	118.50	
Tucker " "	12.89	
Boylston Fund for Medical Prizes,	128.86	
Medical School Building Fund,	60,351.08	
Thomas Cary Scholarships,	51.92	
Observatory Subscriptions (balance),	1,172.67	
Bright Legacy,	540.17	
Bussey Building Fund,	801.72	
Lucy Osgood Annuity Fund,	54.46	
Baring Bros. & Co.,	361.67	
Daniel Williams Fund,	44.40	
		64,980.01
Decrease of Stock Acc't, by amount of this year's deficit charged off,		14,738.64
Gore Annuity Fund, spent in improving Gore Hall, out of principal,		483.05
Sever Hall Fund, balance of account spent on building,		465.31
Amount carried forward,		$80,667.01

Statement showing Changes in the Different

Amount brought forward, .	$10,128.85
John Glover Fund,	56.54
Rebecca A. Perkins Fund,	120.66
Quincy Tufts Fund,	38.27
Day Fund,	35.44
Bowdoin Prizes for Dissertations,	232.15
Botanic Garden Fund,	128.20
Physical Laboratory Fund,	543.12
Subscription for Library,	322.10
Bowditch Book Fund,	39.90
Bright " "	1,103.77
Denny " "	126.70
Farrar " "	6.48
Haven " "	171.87
Hayward " "	191.80
Hollis " "	43.90
Lane " "	116.13
Minot " "	187.52
Sever " "	299.05
Shapleigh " "	207.92
Sumner " "	29.08
Ward " "	305.96
Wales " "	53.92
Walker " "	197.59
Sundry gifts for Books (unexpended balances),	63.90
Law School (balance),	364.26
Medical School (balance),	7,843.92
Warren Fund for Anatomical Museum,	533.77
Boylston Fund for Medical Books,	121.34
Medical Library Fund,	134.94
Edward M. Barringer Fund,	42.99
Divinity School (general fund),	2,819.41
Winn Professorship of Ecclesiastical History,	500.00
Jackson Foundation,	86.44
J. H. Kendall Scholarship,	177.08
Nancy " "	65.88
Adams Ayer Fund,	42.04
George Chapman "	123.47
Joshua Clapp "	168.21
Divinity School Beneficiary money returned,	89.19
Abner W. Buttrick Fund,	596.28
Sturgis Hooper "	103.35
David Sears "	613.34
Josiah Quincy "	683.50
Robert Troup Paine "	1,071.59
James Arnold "	425.01
Arnold Arboretum "	2,012.15
Amount carried forward,	$33,368.98

Funds during the year ending August 31, 1882. (Continued.)

Amount brought forward, ... $80,667.01

Amount carried forward, ... $80,667.01

Statement showing Changes in the Different

Amount brought forward,	$33,368.93	
Gray Fund for Engravings, ...	248.67	
Gore Annuity Fund, ...	267.61	
Mary Osgood " "	50.93	
Bemis " "	57.50	
Gospel Church "	134.54	
Sarah Winslow "	11.74	
		34,139.92
Increase of Funds established during the year.		
Lowell Book Fund, ...	469.98	
George and Martha Derby Scholarship, . . .	199.06	
		669.04
Credit balances created,		
Law School Building Fund, ...	125,139.80	
Bussey Institution, ...	805.55	
Bright Scholarships, ...	570.17	
Gift for endowment of Dental School, treated last year as income, now transferred to principal,	5.00	
		126,520.52
Bowditch Scholarships, gain from change of special investment,		11,275.00
Total, ...		$172,604.48

Funds during the year ending August 31, 1882. (Continued.)

Amount brought forward, ...	**$80,667.01**
Balance, which is the net increase of the Funds for the year ending August 31, 1882, apart from gifts for capital account,	**91,937.47**
Total, ...	**$172,604.48**

The following tables are not found, in their present form, in the Treasurer's books. They are intended to exhibit with some detail the resources and the expenditures of each department of the University. The income of every fund held by the University is given in these tables, and also the sum paid out for the specific object of each and every fund, in case that sum be either less or more than the actual income of the fund. If the object to which the income of a fund is to be applied be a general one, — like salaries, for example,— no separate mention is made in these tables of that appropriation. That particular payment is merged with others of the same kind under the general heading. A balanced summary of these tables will be found on page 50.

TABLE No. I.

THE UNIVERSITY.

RECEIPTS.

Income of the unappropriated fund heretofore called the Stock Account,	$5,603.20	
Income of the following funds: —		
Insurance and Guaranty,	7,960.11	
Israel Munson,	885.15	
Leonard Jarvis,	948.21	
Samuel D. Bradford,	295.05	
Peter C. Brooks,	70.25	
Thomas Cotton,	8.26	
Parker Fellowship,	3,236.92	
John Thornton Kirkland Fellowship,	671.48	
Harris Fellowship,	592.40	
James Walker Fellowship,	562.00	
Rogers Scholarship,	1,562.98	
Sumner Prize,	89.86	
Sever,	505.80	
Retiring Allowance,	1,224.37	
John C. Gray,	1,405.00	
		25,621.04
For the degree of S.D.		60.00
For care of the **Sarah Winslow** Fund,		6.49
Balance remaining after dividing the net income among the Funds,		208.97
Sale of Quinquennial Catalogues,		8.00
From other Departments for proportion of expenses of Bursar's office,		438.02
From **Robert N. Toppan**, additional gift for prize on Political Science,		150.00
		$26,492.52

PAYMENTS.

Overseers' Expenses.		
Advertising,	$220.90	
Printing President's Annual Report,	458.25	
Printing Treasurer's " "	118.69	
Printing other reports, auditing Treasurer's accounts, &c.,	184.78	
Amount carried forward,		$982.62

TABLE I., CONTINUED.

PAYMENTS.

Amount brought forward, ...		$982.62
Office Expenses.		
President's	124.69	
Treasurer's	337.32	
Bursar's	616.37	
Supt. of Buildings, ...	24.60	
Corporation Rooms (fuel, rent, &c.), ...	1,701.56	2,804.54
Salaries.		
President, ...	$5,007.88	
Treasurer, ...	4,000.00	
Secretary of the Board of Overseers, ...	100.00	
Bursar, ...	3,000.00	
Bursar's Assistant, ...	834.44	
Secretary at Cambridge, ...	600.00	
For keeping Treasurer's books and copying records and other papers, ...	2,800.00	
Superintendent of Buildings, ...	1,531.14	17,873.46
Fellowships.		
John Parker, ...	3,600.00	
Harris, ...	267.41	
John Thornton Kirkland, ...	375.00	
Rogers Scholarship, ...	600.00	
James Walker, ...	250.00	5,092.41
Memorial Hall and Sanders Theatre.		
Repairs, fuel, gas, &c., ...		1,554.42
Sundries.		
Advertising, ...	37.05	
Labor, &c. on grounds outside of College Yard,	269.60	
Repairs and improvements on the President's house,	78.31	
Furniture, ...	701.30	
Subscription to Mercantile Agency, ...	125.00	
Watering streets, ...	205.00	
Watchmen, ...	500.63	
Examinations at New York, Cincinnati, and Exeter,	124.60	
Rent of Hall in Boston for lectures on Pedagogy,	36.00	
Editing list of University publications, ...	66.90	
Fire Apparatus, ...	48.00	
Freight, legal services, diplomas, &c., ...	144.57	2,336.96
		$30,644.41

Table No. II.

THE COLLEGE.

RECEIPTS.

From Term Bills.			
Instruction,		$128,656.66	
Rents available for general expenses,		33,873.88	
Diplomas,		452.50	162,983.04
Income of Scholarship Funds.			
Abbot,		$143.65	
Alford,		44.45	
Bartlett,		286.68	
Bassett. Interest,	$58.56		
From special investment,	275.00	333.56	
Bigelow,		665.46	
Bowditch. Interest,	$4,226.07		
From special investment,	1,681.95	5,908.02	
Bright, ½ income of Bright Legacy,		1,405.00	
Browne,		153.93	
Class of 1802,		399.92	
" **1814,**		175.57	
" **1815 (Kirkland),**		279.88	
" **1817,**		210.08	
" **1835,**		148.14	
" **1841,**		208.33	
" **1852 (Dana)** (accumulating),		159.50	
Crowninshield (accumulating),		354.57	
Derby, George and Martha,		199.06	
Wm. Samuel Eliot,		300.73	
Farrar,		337.14	
Greene,		137.47	
Levina Hoar (Town of Lincoln),		292.35	
Hodges (accumulating),		340.23	
Hollis,		272.06	
Matthews (½ of net rents of Hall),		4,930.17	
Morey,		435.49	
Pennoyer. Interest,	$119.82		
Annuity,	277.50	397.32	
Edward Russell (accumulating),		35.86	
Saltonstall, Mary and Leverett,		216.15	
Saltonstall, Dorothy (accumulating),		33.94	
Savage,		300.00	
Sever,		178.32	
Sewall,		527.83	
Shattuck,		2,422.16	
Slade,		299.10	
Story,		154.77	
Gorham Thomas,		233.96	
Toppan,		365.19	
Townsend,		1,412.47	
Walcott,		218.56	
Whiting (accumulating),		460.39	25,377.46
Received from the Trustees of the **Thayer** Scholarships,			3,600.00
Amount carried forward,			$191,960.50

TABLE II., CONTINUED.

RECEIPTS.

Amount brought forward, ...			$191,960.50
Other Beneficiary Funds, income of.			
"Exhibitions," Interest, ...	$678.05		
Returned by beneficiaries,	832.35	$1,510.40	
Palfrey "Exhibition,"		99.14	
Samuel Ward, ...		50.00	
John Glover (accumulating), ...		56.54	
Rebecca A. Perkins "		120.66	
Quincy Tufts, ...		613.87	
Moses Day, ...		295.44	
Munroe, ...		574.76	
			3,320.81
Prize Funds, income of.			
Thomas Lee Prizes for Reading, ...		893.52	
Ward Nicholas Boylston Prizes for Elocution,		244.41	
James Bowdoin Prizes for Dissertations, . . .		657.15	
Edward Hopkins Gift for "Deturs,"		293.13	
			2,088.21
Funds for Instruction.			
Income of the **Alford** Professorship, ...		1,559.49	
Boylston "		1,592.54	
Eliot "		1,215.04	
J. Phillips's addition to Eliot Prof.,		500.00	
Erving Professorship, ...		196.70	
Fisher "		2,022.69	
Hersey "		702.75	
Hollis " (Mathematics), . .		210.58	
McLean "		2,420.14	
Perkins "		1,180.20	
Plummer "		1,406.12	
Pope "		2,950.50	
Rumford "		2,995.75	
Smith "		1,300.47	
Fund for Permanent Tutors, . . .		912.69	
Thos. Lee Fund for the Hersey Prof.		988.39	
Class Subscription, ...		7,025.00	
Henry Flynt, ...		18.44	
Hollis Prof. of Divinity (accumulat'g),		1,832.63	
Paul Dudley Fund for Lectures, "		108.13	
Anonymous gift, to increase salary, ...		500.00	
			31,638.25
Botanic Garden.			
Income of Fund. Interest, ...	$2,027.98		
From special investment,	1,020.00	3,047.98	
" " the **Lowell** Fund, ...		1,548.25	
Estimated value of use of house by Prof. Gray,		1,000.00	5,596.23
Herbarium. Income of Fund, ...		1,022.45	
Sale of paper, &c., ...		240.4	1,046.49
Amount carried forward, ...			$235,650.49

TABLE II., CONTINUED.

RECEIPTS.

Amount brought forward, ...		$235,650.49
Income of Jonathan Phillips's unrestricted Fund,	$1,770.30	
" " John A. Blanchard's " "	59.01	
" " Daniel H. Pierce Fund, ...	688.72	
" " J. W. P. Abbot's " (accumulating),	181.81	
" " Fund for Physical Laboratory, ...	543.12	
		3,242.96
Sundries.		
Pew Rents, Appleton Chapel, ...	174.00	
For the Degree of Bachelor of Arts out of course, and examination fees, ...	632.50	
Sales of grass and old material, ...	126.00	
Sale of old examination papers, ...	102.55	
For Printing by College Press for other departm'ts,	955.25	
For use of rooms by College officers, ...	945.00	
Sale of tickets to Commencement Dinner of 1882,	509.00	
For use of lockers at Gymnasium, ...	1,304.00	
Fees for use of Gymnasium, ...	20.00	
For use of Gymnasium by other Departments, .	973.84	
From R. H. McDonald, for books for French Dpt.	20.00	
		5,762.14
Total receipts, ...		$244,655.59

PAYMENTS.

Paid the incumbents of the following Scholarships.

Abbot, ...	$150.00
Alford, ...	40.00
Bartlett, ...	250.00
Basset, ...	458.31
Bigelow, ...	750.00
Bowditch, ...	5,250.00
Bright, ...	1,375.00
Browne, ...	150.00
Class of 1802, ...	250.00
" 1814, ...	200.00
" 1815 (Kirkland), ...	250.00
" 1817, ...	200.00
" 1835, ...	150.00
" 1841, ...	175.00
Wm. Samuel Eliot, ...	300.00
Farrar, ...	350.00
Greene, ...	120.00
Levina Hoar, ...	200.00
Hollis,.	250.00
Matthews, ...	4,500.00
Morey, ...	500.00
Amount carried forward,	$15,868.31

TABLE II., CONTINUED.

PAYMENTS.

Amount brought forward,		$15,868.31	
Pennoyer,		380.00	
Saltonstall, Mary and **Leverett**,		200.00	
Savage,		300.00	
Sever,		175.00	
Sewall,		500.00	
Shattuck,		1,800.00	
Slade,		250.00	
Story,		150.00	
Thayer,		3,600.00	
Gorham Thomas,		250.00	
Toppan,		300.00	
Townsend,		1,500.00	
Walcott,		200.00	
			25,473.31
Paid other Beneficiaries.			
Exhibitions,		1,676.19	
Palfrey Exhibition,		90.00	
Samuel Ward Income,		50.00	
Quincy Tufts " (part of),		575.60	
Day Fund " " "		260.00	
Munroe Fund " " "		585.04	
			3,236.83
Prizes. **Lee** Prizes for Reading,		300.00	
Boylston Prizes for Elocution,		255.00	
Bowdoin Prizes for Dissertations		425.00	
"Deturs" from **Hopkins** Fund		329.81	
			1,309.81
Salaries for instruction,			137,059.27
Repairs and improvements on College Edifices not valued on Treasurer's books,			4,743.93
Insurance on College Edifices, etc. not valued on Treasurer's books,			10.76
Botanic Garden, for labor, repairs, and materials,			5,468.03
Herbarium, " " "			1,138.64
Gymnasium, Locker money, paid Director,		1,088.00	
Salaries and wages,		2,595.00	
Janitors and cleaning,		807.84	
Gas, water, and sundries,		935.91	
Fuel,		629.62	
Apparatus and fittings,		215.65	
			6,272.02
General Expenses.			
Appropriations for collections and laboratories.			
Physical Apparatus (Prof. Lovering),	$600.00		
Mineral and Chemical (Prof. Cooke),	800.00		
Rumford (Prof. Gibbs),	650.20		
Botanical (Prof. Farlow),	599.42		
Amounts carried forward,	$2,649.62		$184,712.60

TABLE II., CONTINUED.

PAYMENTS.

Amounts brought forward,	$2,649.62		$184,712.60
Physiological (Asst. Prof. James),	74.14		
Geological (Prof. Shaler),	135.63		
Zoölogical (Instructors Faxon and Mark),	161.71		
Fine Arts (Prof. Norton),	515.33		
Physical (Prof. Trowbridge),	593.44		
Drawing (Instructor Moore),	146.57		
Greek Department (Prof. Goodwin),	75.70		
Rhetoric and English (Prof. Hill)	7.96		
		$4,360.10	
Appleton Chapel. Singing, blowing organ, etc.,		1,624.12	
Admission examinations,		1,004.65	
Advertising,		15.75	
Books and binding,		113.80	
Clerk in Chemical Laboratory,		286.90	
Cleaning and care of College buildings not valued on Treasurer's books,		8,492.22	
College Yard expenses, labor and material, &c.,		2,887.06	
Commencement Dinner 1882,		913.26	
Dean's and Registrar's Office, clerk, stationery, postage, copying, etc.,		1,681.50	
Fuel,		3,615.69	
Furniture,		51.77	
Freight, diplomas, and sundries,		560.36	
Gas,		1,771.01	
Mats,		86.80	
Music, Class-Day,		125.00	
" Commencement, 1881, 1882,		335.00	
Pews hired in Cambridge churches,		927.00	
Preaching and morning services,		2,295.00	
Printing office, expenses,		3,249.81	
Printing,		122.73	
Services of examiners and proctors,		2,639.13	
" " undergraduates,		707.91	
Watchman,		973.00	
Water rates,		430.06	
			39,269.63
Total payments,			$223,982.23

TABLE No. III.

THE LIBRARY.

RECEIPTS.

Income of the following Funds for the purchase of books.

Subscription for Library,		$616.23
Nathaniel I. Bowditch,		118.08
Bright, ½ income of the **Bright** Legacy,	$1,405.00	
Interest on balance,	85.20	1,490.20
Amount carried forward,		$2,224.51

Amount brought forward,		$2,224.51	
Denny,		313.32	
Eliza Farrar,		297.69	
Horace A. Haven,		187.93	
George Hayward,		312.70	
Thomas Hollis,		135.72	
Sidney Homer,		118.30	
Frederick A. Lane,		319.33	
Lowell,		655.69	
Charles Minot. Interest,	$58.67		
From special investment,	4,200.00	4,258.67	
Stephen Salisbury,		298.25	
Sever,		1,137.43	
Samuel Shapleigh,		238.68	
Charles Sumner,		2,150.77	
Ichabod Tucker. From special investment,		200.00	
Thomas W. Ward,		320.85	
George W. Wales. Gift,	$200.00		
Interest on unexpended balance,	7.03	207.03	
James Walker,		915.61	
Gift from Dante Society,		50.00	
Subscription of 1880,		59.61	14,402.09
James Savage Fund for general expenses (½ of income),		1,030.20	
Daniel Austin " " " "		314.72	1,344.92
William B. Weeden, gift to aid in publ. Lib'y Bulletins,		100.00	
Henry Lee, " " " " " " "		50.00	
Alexander Agassiz, " " " " " " "		50.00	
Charles P. Curtis, " " " " " " "		200.00	
Charles S. Sargent, " " " " " " "		50.00	450.00
Fees for use of Library,		200.00	
Sales of Bulletins and Calendars,		153.00	353.00
			$16,550.01

PAYMENTS.

For Books from		
Subscription Fund,	$294.13	
Bowditch "	78.18	
Bright "	386.43	
Denny "	186.62	
Farrar "	291.21	
Gray "	.70	
Haven "	16.06	
Hayward "	120.90	
Hollis "	91.82	
Homer "	143.99	
Lane "	203.20	
Lowell "	185.71	
Amount carried forward,	$1,998.95	

TABLE III., CONTINUED.

PAYMENTS.

Amount brought forward,	$1,998.95	
Minot Fund,	4,071.15	
Salisbury "	416.75	
Sever "	838.38	
Shapleigh "	30.76	
Sumner "	2,121.69	
Tucker "	212.89	
Ward "	14.89	
Wales "	153.11	
Walker "	718.02	
Dante Society money,	8.64	
Duplicate "	2.93	
Subscription of 1880,	62.55	
		10,650.71
Salaries and wages,	15,477.70	
Binding,	1,139.18	
Stationery and postage,	428.40	
Fuel,	837.95	
Repairs and improvements,	374.30	
Freight, water, and sundries,	169.54	
Janitors and cleaning,	431.27	
Furniture,	29.60	
Insurance on steam boiler,	15.00	
Bulletins, and other printing,	1,197.12	
Mats,	37.15	
		20,137.21
		$30,787.92

TABLE NO. IV.

DIVINITY SCHOOL.

RECEIPTS.

Income of the following Funds applicable to Salaries.

General Fund,	$1,161.49
Benjamin Bussey Professorship,	2,112.22
Parkman Professorship,	900.10
John Hancock "	337.65
Winn Professorship of Ecclesiastical History,	2,464.15
Samuel Dexter,	1,139.74
Henry Lienow,	516.20
Mary P. Townsend,	295.05
Winthrop Ward,	118.02
Samuel Hoar,	59.01
Abraham W. Fuller,	59.01
Caroline Merriam,	59.01
Joseph Baker,	442.58
Amount carried forward,	$9,664.23

TABLE IV., CONTINUED.

RECEIPTS.

Amount brought forward, . . .	$9,664.23	
Thomas Tileston of New York Endowment, .	2,248.00	
Oliver Ames, ...	955.40	
Henry P. Kidder, ...	562.00	
Abby Crocker Richmond, ...	56.20	
New Subscription, ...	3,787.77	17,273.60
Income of Scholarship Funds.		
Thomas Cary, ...	298.08	
George Chapman, ...	123.47	
Joshua Clapp, ...	168.21	
Jackson Foundation, ...	726.44	
J. Henry Kendall, ...	177.03	
Nancy Kendall, ...	159.21	1,652.44
Income of other Funds.		
Joshua Clapp, ...	122.40	
William Pomeroy, ...	59.01	
Hannah C. Andrews, ...	29.51	
Lewis Gould, ...	51.20	
Daniel Austin, ...	44.96	
Abner W. Buttrick, ...	596.28	
Adams Ayer, ...	42.04	
Interest on Beneficiary money returned, ...	89.19	1,034.59
Term Bills.		
For Instruction, ...	1,483.35	
For Rents, ...	1,465.77	
		2,949.12
Balance of appropriation for books repaid, ...		124.37
Benjamin Bussey Trust. One-fourth of net income for use of this School, ...		2,342.53
		$25,376.65

PAYMENTS.

For Salaries for Instruction, ...	$17,900.00	
Services of students, ...	200.00	
Labor, repairs, and improvements, ...	514.53	
Cleaning and care of rooms, ...	575.60	
Books and binding, ...	40.22	
Printing, ...	7.75	
Fuel, ...	6.25	
Gas, ...	104.64	
Water rates, ...	30.00	
Diplomas and sundries, ...	20.85	
Collation, ...	56.25	
Advertising, ...	2.80	
Proportion of expenses of Bursar's office, ...	60.49	
" " " " Gymnasium, ...	134.48	
Stationery and postage.	23.43	
Amount carried forward, ...		$19,677.29

TABLE IV., CONTINUED.

PAYMENTS.

Amount brought forward,		$19,677.29
Paid the incumbents of the following Scholarships.		
Jackson Foundation,	$640.00	
Cary,	350.00	
Nancy Kendall,	93.33	
		1,083.33
		$20,760.62

TABLE NO. V.

LAW SCHOOL.

RECEIPTS.

Income of the following funds.		
Law School Balance,	$453.08	
Nathan Dane,	885.15	
Benjamin Bussey Professorship,	1,347.68	
Isaac Royall,	468.76	
New Professorship,	2,250.00	
Law School Book Fund,	480.00	
" " Building "	763.65	
Benjamin Bussey Trust (½ of net income for use of this School),	2,342.53	
		8,990.85
Term Bills.		
For instruction,		22,550.00
Anonymous gift for the erection of a new building,		135,000.00
		$166,540.85

PAYMENTS.

For Salaries for Instruction,	$21,225.00	
Librarian and Assistants,	2,650.00	
Janitor and coat-room boy,	761.86	
Books and binding,	2,477.45	
Fuel,	532.90	
Gas,	304.80	
Printing	167.50	
Scholarships,	750.00	
Labor, repairs, and improvements,	235.90	
Stationery and postage,	80.35	
Freight, diplomas, and sundries,	81.57	
Water rates,	61.42	
Furniture,	12.25	
Account of new building,	10,623.85	
Services of examiners and proctors,	56.75	
Proportion of expenses of Bursar's office,	314.95	
" " " " Gymnasium,	700.24	
		$41,036.79

TABLE NO. VI.

MEDICAL SCHOOL.

RECEIPTS.

Income of the following Funds.			
Medical School, balance,		$3,342.16	
Jackson Medical,		1,078.65	
Warren, for Anatomical Museum,		646.19	
Ward Nicholas Boylston, for Medical Prizes,		220.14	
Ward Nicholas Boylston, for Medical Books,		121.34	
George C. Shattuck,		962.65	
Hersey Professorship, two-fifths income of the fund,		433.45	
Medical Library Fund,		139.94	
Medical School Building Fund,		5,278.60	
Quincy Tufts,		112.40	
Edward M. Barringer,		42.99	
John Foster, income for Medical students every third year,		178.27	
			12,556.78
From students for instruction,		47,395.90	
" " for graduation fees,		2,580.00	
" " in Chemical Laboratory, breakage and chemicals,		1,024.64	
" " in Practical Anatomy, for material,		415.00	
			51,415.54
Subscriptions to the Building Fund,			15,600.00
			$79,572.32

PAYMENTS.

Boylston Medical Prizes. Prizes,	$300.00		
Advertising,	49.00	349.00	
Warren Anatomical Museum.			
Expenses, and additions to collection,		112.42	
Chemical Laboratory, apparatus, chemicals, and wages,		1,376.50	
Physiological Laboratory, expenses and wages,		1,008.34	
Practical Anatomy and Surgery Expenses,		1,864.94	
Topographical Anatomy Expenses,		45.00	
Obstetrics Expenses,		321.75	
Histology "		36.51	
Materia Medica "		47.56	
Salaries for instruction,		37,743.44	
Repairs and improvements,		425.38	
Scholarships,		1,300.00	
For account of new building,		81,229.68	
			125,860.52
General Expenses.			
Advertising and catalogues,		$708.58	
Alcohol,		39.75	
Books from Library Fund,		5.00	
Cleaning,		259.13	
Amounts carried forward,		$1,012.46	$125,860.52

TABLE VI., CONTINUED.

PAYMENTS.

Amounts brought forward,	$1,012.46	$125,860.52
Clerk,	700.00	
Diplomas,	89.87	
Doorkeeper,	60.00	
Expenses collecting subscriptions,	38.40	
Faculty meetings,	172.85	
Fuel,	344.80	
Gas,	481.00	
Janitor,	1,200.00	
Librarian,	20.00	
Printing,	251.00	
Rent of rooms (in part) for Pathological specimens,	200.00	
Rent and heating of rooms for Chemical Laboratory,	600.00	
Services of Examiners,	15.00	
Stationery, postage, and sundries,	165.64	
Travelling expenses,	70.29	
Water rates,	93.97	5,514.78
		$131,375.30

TABLE No. VII.

DENTAL SCHOOL.

RECEIPTS.

Income of Subscription Fund,	$18.71	
From Students,	4,000.00	
Infirmary,	559.07	
Laboratory,	182.00	
Rent of a part of the School building,	245.00	
		$5,004.78

PAYMENTS.

Advertising and catalogues,	$114.50	
Care of operating room at hospital, and cleaning,	69.50	
Drugs, chemicals, and sundries,	83.08	
Diplomas,	9.43	
Expenses in Oral Pathology and Anatomy,	75.00	
" " Dental Therapeutics,	92.00	
Fuel,	146.15	
Gas,	15.40	
Gold foil and metals,	237.22	
Instruments and apparatus,	401.85	
Interest on debt,	949.96	
Printing,	28.50	
Repairs to building,	145.45	
Salaries of demonstrators,	1,100.00	
Stationery and postage,	72.95	
Taxes,	108.42	
Water rates,	11.00	
To Subscription Fund, Dr. Silva's subscription (entered as a gift for immediate use last year),	5.00	$3,665.41

TABLE No. VIII.

LAWRENCE SCIENTIFIC SCHOOL.

RECEIPTS.

Income of the following Funds.

Professorship of Engineering,		$2,180.95	
Professorship of Chemistry,		160.79	
Abbott Lawrence,		3,458.32	
James Lawrence,		2,881.08	
John B. Barringer. Interest,	$1,600.97		
From special investment,	200.00	1,800.97	
Gray Fund for Zoölogical Museum,		2,810.00	
Sturgis Hooper,		5,620.00	
Agassiz Memorial. Interest,	$15,077.00		
From special investment,	1,482.94	16,559.94	
Teachers and Pupils,		426.78	
Humboldt,		435.04	
Permanent Fund for Museum of Zoölogy,		6,601.76	
			42,885.63
Term Bills, for Instruction,			4,985.00
			$47,870.63

PAYMENTS.

Paid on the order of the Faculty of the Museum of Comparative Zoölogy, from the following Funds.

Gray,	$2,810.00	
Agassiz Memorial,	11,907.88	
Teachers and Pupils,	426.78	
Humboldt,	435.04	
Permanent,	6,601.76	22,181.46
Salaries for instruction,	17,258.32	
Expenses in Geology,	516.65	
Stationery postage, and sundries,	15.85	
Proctorial services,	26.25	
Books, Engineering Department,	89.30	
Instruments and apparatus,	476.12	
Printing,	43.00	
Fuel,	369.12	
Gas,	19.20	
Janitor and cleaning,	523.00	
Labor and repairs,	232.33	
Expenses Chemical Laboratory (part of),	50.97	
Scholarships,	600.00	
Interest on advances,	294.31	
Water rates,	19.77	
Proportion of expenses of Bursar's office,	62.58	
" " " " Gymnasium,	139.12	
		20,735.89
		$42,917.35

TABLE NO. IX.

OBSERVATORY.

RECEIPTS.

Income of the following Funds.		
Observatory, balance,	$374.01	
Edward B. Phillips,	6,198.52	
James Hayward,	1,180.20	
David Sears,	1,226.68	
Josiah Quincy,	683.50	
James Savage (½ of net income),	1,030.20	
Charlotte Harris,	112.40	
		10,805.51
Subscriptions, for immediate use,		3,330.00
From sale of time signals,		2,850.00
		$16,985.51

PAYMENTS.

Salaries and wages,	$13,375.53	
Cleaning and care of Observatory,	234.07	
Gas,	71.76	
Instruments and apparatus, including repairs on same,	1,430.00	
Repairs and improvements on buildings and grounds,	882.52	
Stationery, postage, and telegraphing,	240.17	
Fuel,	116.29	
Books and binding,	225.17	
Water rates,	50.00	
Printing,	63.70	
Freight and sundries,	114.68	
Chemicals,	24.95	
Watering streets,	32.50	
		$16,861.34

TABLE NO. X.

BUSSEY INSTITUTION.

RECEIPTS.

From **Bussey** Trust (½ net income),	$4,685.06	
From **Bussey** Building Fund (net income),	707.04	
Fees for Instruction,	410.00	
Sale of coal to Arboretum,	74.16	
From **Arnold** Arboretum for rent of greenhouses,	50.00	
		$5,926.26

PAYMENTS.

For Salaries,	$4,220.00	
Books,	23.43	
Stationery and postage, cleaning, gas, &c.,	44.56	
Fuel for school building,	8.00	
Wages,	174.50	
Horticultural Department, expenses,	577.73	
Repairs and improvements,	47.49	
Printing,	25.00	
		$5,120.71

TABLE X., CONTINUED.

Bussey Building Fund.

Receipts.

Income of unexpended balance of Fund, ...	$207.04	
Estimated value of use of house by Prof. Storer, . . .	500.00	$707.04

Payments.

Repairing greenhouses and gardener's house, ...	$801.72	
Income carried to Bussey Institution, ...	707.04	1,508.76

James Arnold Fund.

Receipts.

Income of Fund, ...	$8,500.14

Payments.

19/20 of income carried to Arnold Arboretum, ...	$8,075.13

Arnold Arboretum.

Receipts.

Income of unexpended balance of Fund, ...	$446.12	
From James Arnold Fund, ...	8,075.13	$8,521.25

Payments.

Salary of Director and Assistant, ...	$2,900.00	
Expenses of Arboretum, ...	3,609.10	$6,509.10

TABLE NO XI.

MISCELLANEOUS FUNDS.

Bussey Trust.

Receipts.

Net income from Real Estate, ...	$16,170.12

Payments.

Annuities, ...	$6,800.00	
One-half of the remaining income to Bussey Institution,	4,685.06	
One-quarter " " " Divinity School, .	2,342.53	
" " " " " Law School, . . .	2,342.53	$16,170.12

Gray Fund for Engravings.

Receipts.

Interest on Fund, ...	$881.95	
From sale of catalogues, ...	20.00	$901.95

Payments.

To the Treasurer of the Museum of Fine Arts, . .	$650.00	
For freight, &c., ...	3.28	$653.28

Annuity Funds.

Receipts.

Gore, income,	$1,167.61	
Mary Osgood, income,	410.93	
Lucy Osgood, income,	725.54	
Anonymous Observatory, income,	720.00	
Bemis, income,	2,810.00	
		$5,834.08

Payments.

Gore, annuities,	$900.00	
Mary Osgood, annuity,	360.00	
Lucy Osgood, annuities,	780.00	
Anonymous Observatory, annuity,	720.00	
Bemis, annuity,	2,752.50	
		$5,512.50

Daniel Williams Fund.

Receipts.

Interest on Fund,		$904.54

Payments.

Treasurer of Herring Pond Indians,	$366.81	
" " Mashpee Indians,	582.13	
		$948.94

Sarah Winslow Fund.

Receipts.

Interest on Fund,		$271.11

Payments.

Minister at Tyngsborough, Mass.,	$126.44	
Teacher at " "	126.44	
Commission on income credited to University,	6.49	
		$259.37

James Savage Fund.

Receipts.

Interest on Fund,		$2,360.40

Payments.

Scholarship,	$300.00	
One-half the remaining income to Library,	1,030.20	
" " " " Observatory,	1,030.20	
		$2,360.40

Bright Legacy.

Receipts.

Interest on Fund,		$2,810.00

Payments.

One-half income to Bright Book Fund,	$1,405.00	
To Scholarship Fund,	1,945.17	
		$3,350.17

TABLE XI., CONTINUED.

Sundry Accounts.

Receipts.

Gain from change of investm't for Bowditch Scholarships,	$11,275.00	
Chinese Subscriptions paid and fee for instruction, . .	1,502.68	
Advances to books from "General Investments," . . .	29.36	
Bright Scholarship balance transferred, ...	540.17	
Dr. Silva's subscription to Dental School transferred,	5.00	
		$13,352.21

Payments.

Gore Annuity Fund, spent in improving Gore Hall, .	$483.05	
Sever Hall Fund, balance of account spent on building,	465.81	
Expenses of Chinese Instructor, salary, and travelling expenses, ...	4,082.81	
Annuity for Class of 1802, ...	120.00	
Advance to Geological Dept. to be repaid next year, .	.25	
Advances repaid, to		
Agassiz Memorial Fund, ...	4,652.06	
Dental School, ...	1,339.37	
Lawrence Scientific School, ...	197.37	
Chinese Subscription, ...	374.38	
Baring Bros. & Co., ...	361.67	
		12,076.77

Gospel Church Fund (accumulating).	Interest on Fund, . . .	$184.54
Robert Troup Paine Fund "	From special investment,	1,071.59

GENERAL SUMMARY OF THE TABLES.

			Receipts.	Payments
Table	I.	University, ...	26,492.52	30,644.41
Table	II.	College, ...	244,655.59	223,982.23
Table	III.	Library, ...	16,550.01	30,787.92
Table	IV.	Divinity School, ...	25,376.65	20,760.62
Table	V.	Law School, ...	166,540.85	41,036.79
Table	VI.	Medical School, ...	79,572.32	131,375.30
Table	VII.	Dental School, ...	5,004.78	3,665.41
Table	VIII.	Lawrence Scientific School, . . .	47,870.63	42,917.35
Table	IX.	Observatory, ...	16,985.51	16,861.34
Table	X.	Bussey Institution, ...	5,926.26	5,120.71
		Bussey Building Fund, ...	707.04	1,508.76
		James Arnold Fund, ...	8,500.14	8,075.13
		Arnold Arboretum, ...	8,521.25	6,509.10
Table	XI.	Bussey Trust, ...	16,170.12	16,170.12
		Gray Fund for Engravings, ...	901.95	653.28
		Annuity Funds, ...	5,834.08	5,512.50
		Daniel Williams Fund, ...	904.54	948.94
		Sarah Winslow Fund, ...	271.11	259.37
		James Savage Fund, ...	2,360.40	2,360.40
		Bright Legacy, ...	2,810.00	3,850.17
		Sundry Accounts, ...	13,352.21	12,076.77
		Gospel Church Fund, ...	184.54	
		Robert Troup Paine Fuud, ...	1,071.59	
			696,514.09	604,576.62
			604,576.62	
		Balance	$91,937.47	

Which is the net increase of the Funds and balances, excluding gifts for capital account, as also shown on page 25.

Certificate of the Joint Committee of the Corporation and Overseers of Harvard College, for examining the Books and Accounts of the Treasurer entered in the Journal kept by him.

WE, the undersigned, a joint committee of the Corporation and Overseers of Harvard College to examine the books and accounts of the Treasurer for the year ending August 31, 1882, have examined and audited the Cash book from pages 122 to 161, inclusive, and have seen that all the bonds, notes, mortgages, certificates of stock, and other evidences of property, which were received by him and on hand at the beginning of said year, are now in his possession, or are fully accounted for by entries made therein. We have also noticed all payments, both of principal and interest, indorsed on any of said bonds or notes, and have seen that the amounts so indorsed have been duly credited to the College.

We have carefully examined all notes, bonds, mortgages, and other securities invested during the said year, and are of opinion that all such investments' have been judiciously made and are amply secured.

We have in like manner satisfied ourselves that all the entries for moneys expended by the Treasurer, or charged in his books to the College, are well vouched; such of them as are not supported by counter entries being proved by regular vouchers and receipts.

The Committee have also seen that all the entries for said year are duly transferred to the Ledger, and that the accounts there are rightly cast, and the balances carried forward correctly to new accounts.

(Signed,)

FRANCIS PARKMAN, JOHN QUINCY ADAMS,	*Committee on the part of the Corporation.*
HENRY P. KIDDER, AMOS A. LAWRENCE, CHARLES HENRY PARKER, ISRAEL M. SPELMAN, SOLOMON LINCOLN,	*Committee on the part of the Board of Overseers.*

Boston, Dec. 9, 1882.

ANNUAL REPORTS

OF THE

PRESIDENT AND TREASURER

OF

HARVARD COLLEGE.

1882-83.

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1883.

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1883.

PRESIDENT'S REPORT FOR 1882-83.

To the Board of Overseers: —

The President of the University has the honor to submit the following Report for the Academic year 1882–83; namely, from Sept. 28, 1882, to Sept. 27, 1883: —

On the 29th of October, 1882, Mr. Lester Sackett Ford, Demonstrator in Zoölogy at the Bussey Institution, and at the time a house-officer at the Massachusetts General Hospital, died at that hospital of typhoid fever, after a brief illness. Mr. Ford took the degree of Bachelor of Agricultural Science in 1879, being the first graduate of the Bussey Institution, and at the time of his death had also completed his course for the degree of Doctor of Medicine. He was a young man of great promise, who by remarkable mental powers and rare beauty and force of character, had won his way through serious obstacles to the gateway of a profession which he would have adorned. His untimely death was mourned by all who knew him.

Assistant-Professor Adrien Jacquinot died in Cambridge on the 21st of September, 1883, near the end of the long vacation and soon after his return from a summer visit to France. He had been in the service of the University for eleven years, and had so won the respect and affection of his colleagues and his pupils by his simplicity, amiability, and disinterestedness, that although he died far from his kindred and in a strange land, he died among friends whose attachment could hardly have been greater had they been the friends of his youth. Professor Jacquinot's teaching gave evidence not only of thorough acquaintance with French literature, but of keen appreciation of what is best in all literature. He loved his College work, and gave in his devotion to it a precious example of industry and fidelity.

RESIGNATIONS.

Daniel Denison Slade, Professor of Applied Zoölogy, November 6, 1882.
Francis Winthrop Dean, Tutor in Engineering, November 6, 1882.
Henry Burleigh Wenzell, Proctor, November 6, 1882.
Oliver Wendell Holmes, Professor of Anatomy, November 20, 1882.
Samuel Hubbard Scudder, Assistant Librarian, December 11, 1882.
Edwin Perley Bradbury, Clinical Instructor in Operative Dentistry, December 22, 1882.
Oliver Wendell Holmes, Jr., Professor of Law, January 8, 1883.
Dwight Moses Clapp, Clinical Instructor in Operative Dentistry, January 29, 1883.
Calvin Ellis, Dean of the Medical Faculty, June 25, 1883.
David Humphreys Storer,
Henry Jacob Bigelow,
Richard Manning Hodges,
Samuel Cabot,
} Boylston Prize Committee, June 25, 1883.
Frank Er Balch, Steward of the Harvard Dining Association, June 25, 1883.
Manuel Jacob Drennan, Instructor in English, June 27, 1883.
Henry Champion Jones, Assistant in Botany, June 27, 1883.
George Henry Browne, Proctor, September 1, 1883.
Charles Elliott St. John, Proctor, September 1, 1883.
George Lyman Kittredge, Proctor, September 1, 1883.
William Schofield, Proctor, as of September 1, 1883.
Henry Champion Jones, Proctor, as of September 1, 1883.
Henry Nathan Wheeler, Proctor, as of September 1, 1883.
Edward Cornelius Briggs, Clinical Instructor in Operative Dentistry, as of September 1, 1883.
Charles Frederic Mabery, Assistant in Chemistry, September 26, 1883.
Edward Hale, Proctor and President's Secretary, September 26, 1883.

The Corporation accepted with great regret the resignation of Dr. Daniel Denison Slade, Professor of Applied Zoölogy at the Bussey Institution since 1871. Professor Slade had always given the instruction in his department with perfect punctuality and acceptance, until serious illness came upon him in the winter of 1881–82. The succeeding summer in great measure restored his health; but it was not considered prudent for him to undertake to keep the stated appointments which are incumbent upon a teacher. The University thus lost a teacher of scientific spirit, wide information, and strong sense of duty.

Dr. Oliver Wendell Holmes resigned the professorship of Anatomy in November, 1882, after a continuous service of thirty-five years as Parkman Professor, first of Anatomy and Physiology, and then of Anatomy. During all these years, Dr. Holmes has given a large part of his time and strength to the routine of instructing medical students in the elements of human anatomy (and of physiology until 1872), and he has done this work with as much punctuality, thoroughness, and ardor, as if he had no other interest or occupation. Accustomed for twenty-four years to the old *régime* of the School, Dr. Holmes was not an active promoter of the revolution of 1870–71; but he readily entered into the new plans, and greatly enjoyed the improvements which resulted from their adoption. The Corporation and Overseers endeavored to express their sense of the obligations under which Dr. Holmes had laid the Medical School, by electing him Professor Emeritus. The students and the Faculty gave strong expression to their regret at his withdrawal, and will long miss the influence of his erudition, literary fame, and kindly wit.

In June last, Dr. Calvin Ellis, Professor of Clinical Medicine, resigned on account of ill health the position of Dean of the Medical Faculty, which he had held since 1869, during a period of rapid and fundamental changes in the organization and spirit of the School. His influence as Dean was always exerted on the side of thoroughness, liberality, and highmindedness; he preferred the interest of the School to the interest of any individual, whether teacher or student, and the interest of the community to the immediate interest of the School; he actively furthered all the many improvements made by the Faculty during his long term of office; and the great change made in 1870–71 could not have been effected without his support, — a support which was as steady and strong as it was indispensable.

APPOINTMENTS.

[UNLIMITED, OR FOR TERMS LONGER THAN ONE YEAR.]

OLIVER WENDELL HOLMES, to be Emeritus Professor of Anatomy, November 20, 1882.

THOMAS FILLEBROWN, to be Professor of Operative Dentistry, January 8, 1883.

MANUEL JACOB DRENNAN, to be Assistant Professor of English for five years from September 1, 1883, February 26, 1883.

ASA GRAY, to be Director of the Herbarium, April 9, 1883.

JAMES GREENLEAF CROSWELL, to be Assistant Professor of Greek and Latin for five years from September 1, 1883, April 9, 1883.

SILAS MARCUS MACVANE, to be Assistant Professor of History for five years from September 1, 1883, April 9, 1883.

ERNEST YOUNG, to be Assistant Professor of History for five years from September 1, 1883, April 9, 1883.

JAMES BRADSTREET GREENOUGH, to be Professor of Latin, April 23, 1883.

CLEMENT LAWRENCE SMITH, to be Professor of Latin, April 23, 1883.

GEORGE HERBERT PALMER, to be Professor of Philosophy, April 23, 1883.

ARTHUR SEARLE, to be Assistant Professor of Astronomy for five years from June 1, 1883, April 30, 1883.

WILLIAM ALBERT KEENER, to be Assistant Professor of Law for five years from September 1, 1883, May 14, 1883.

JAMES LAURENCE LAUGHLIN, to be Assistant Professor of Political Economy, for five years from September 1, 1883, May 14, 1883.

CHARLES ALBERT BRACKETT, to be Professor of Dental Pathology and Therapeutics, May 14, 1883.

THOMAS DWIGHT, to be Parkman Professor of Anatomy, June 11, 1883.

HENRY PICKERING BOWDITCH, to be Dean of the Medical Faculty, June 25, 1883.

WILLIAM MORRIS DAVIS, to be Instructor in Geology from September 1, 1882, April 23, 1883.

BARRETT WENDELL, to be Instructor in English, June 25, 1883.

LE BARON RUSSELL BRIGGS, to be Instructor in English, June 25, 1883.

Frederick Bradford Knapp, to be Instructor in Surveying and Drawing, June 25, 1883.

Charles Pomeroy Parker, to be Tutor in Greek and Latin for three years from September 1, 1883, June 25, 1883.

Maurice Howe Richardson, to be Demonstrator of Anatomy, June 11, 1883.

John Rayner Edmands, to be Assistant in Observatory in charge of Time Service, February 14, 1883.

John Ritchie, Jr., to be Assistant in Observatory in charge of Distribution of Astronomical Information, February 14, 1883.

Frederick Bradford Knapp, to be Superintendent of Buildings and Grounds from April 24, 1883, April 23, 1883.

Jeremiah J. Sullivan, to be Steward of the Memorial Hall Dining Association from September 1, 1883, August 27, 1883.

[FOR ONE YEAR OR LESS.]

For 1882–83.

Edward Hale, to be President's Secretary, October 9, 1882.

Barrett Wendell, to be Instructor in English, October 9, 1882.

Charles Maynard Barnes, to be Instructor in Sales, October 9, 1882.

Henry Grosvenor Carey, to be Instructor in Vocal Music, November 6, 1882.

Frederick Bradford Knapp, to be Instructor in Surveying and Drawing, November 6, 1882.

Francis Amasa Walker, to be University Lecturer on the Tenure of Land, November 20, 1882.

G. Stanley Hall, to be University Lecturer on Pedagogy, December 22, 1882.

Charles Pomeroy Parker, to be Instructor in Greek and Latin from January 3, January 8, 1883.

Dwight Moses Clapp, to be Clinical Instructor in Operative Dentistry November 6, 1882.

Daniel Taylor Hinckley, to be Demonstrator in Anatomy, November 20, 1882.

Oliver Mayhew Whipple Huntington, to be Assistant in Chemistry, October 9, 1882.

George Lyman Kittredge, to be Proctor, November 20, 1882.

Herbert Morison Clark, to be Proctor, November 20, 1882.

Arthur Lawrence Hall, to be Proctor, November 20, 1882.

For 1883–84.

Joseph Henry Thayer, to be Lecturer on Biblical Theology, April 23, 1883.

Edward Perkins Channing, to be Instructor in History, May 30, 1883.

Albert Bushnell Hart, to be Instructor in American History, May 30, 1883.

Harold Whiting, to be Instructor in Physics, May 30, 1883.

Frank William Taussig, to be Instructor in Political Economy, May 30, 1883.

Charles Edward Faxon, to be Instructor in Botany, June 11, 1883.

Benjamin Marston Watson, to be Instructor in Horticulture, June 11, 1883.

Edward Burgess, to be Instructor in Entomology, June 11, 1883.

Freeman Snow, to be Instructor in Forensics, June 11, 1883.

Josiah Royce, to be Instructor in Philosophy, June 11, 1883.

Henry Dixon Jones, to be Instructor in Elocution, June 25, 1883.

Joseph Randolph Coolidge, to be Instructor in Spanish, June 25, 1883.

Alfred Church Lane, to be Instructor in Mathematics, September 26, 1883.

Charles Frederic Mabery, to be Assistant in Chemistry, June 11, 1883.

George Trumbull Hartshorn, to be Assistant in Organic Chemistry, June 11, 1883.

Oliver Mayhew Whipple Huntington, to be Assistant in Chemistry, June 11, 1883.

George William Perkins, to be Assistant in Biology, June 11, 1883.

Charles Harrington, to be Assistant in Chemistry, June 25, 1883.

Charles Pomeroy Worcester, to be Assistant in Chemistry, September 26, 1883.

Robert Henry Harrison, to be Instructor in Anatomy, April 23, 1883.

John Homans, to be Clinical Instructor in the Diagnosis and Treatment of Ovarian Tumors, June 11, 1883.

Francis Boott Greenough, to be Clinical Instructor in Syphilis, June 11, 1883.

Oliver Fairfield Wadsworth, to be Clinical Instructor in Ophthalmoscopy, June 11, 1883.

Samuel Gilbert Webber, to be Clinical Instructor in Diseases of the Nervous System, June 11, 1883.

Clarence John Blake, to be Clinical Instructor in Otology, June 11, 1883.

John Orne Green, to be Clinical Instructor in Otology, June 11, 1883.

Amos Lawrence Mason, to be Clinical Instructor in Auscultation, June 11, 1883.

James Read Chadwick, to be Clinical Instructor in Diseases of Women, June 11, 1883.

Abner Post, to be Clinical Instructor in Syphilis, June 11, 1883.

James Jackson Putnam, to be Clinical Instructor in Diseases of the Nervous System, June 11, 1883.

Joseph Pearson Oliver, to be Clinical Instructor in Diseases of Children, June 11, 1883.

FREDERICK CHEEVER SHATTUCK, to be Clinical Instructor in Auscultation, June 11, 1883.

THOMAS MORGAN ROTCH, to be Clinical Instructor in Diseases of Children, June 11, 1883.

FRANK WINTHROP DRAPER, to be Lecturer on Forensic Medicine, June 11, 1883.

CHARLES SEDGWICK MINOT, to be Lecturer on Embryology, June 11, 1883.

EDWARD NEWTON WHITTIER, to be Instructor in the Theory and Practice of Physic, June 11, 1883.

WILLIAM PALMER BOLLES, to be Instructor in Materia Medica, June 11, 1883.

FRANCIS AUGUSTINE HARRIS, to be Demonstrator of Medico-Legal Examinations, June 11, 1883.

JOSEPH WEATHERHEAD WARREN, to be Instructor in Oral Pathology and Anatomy, May 30, 1883.

TIMOTHY OTIS LOVELAND, to be Clinical Instructor in the Dental School, May 30, 1883.

CHARLES WILSON, to be Clinical Instructor in the Dental School, May 30, 1883.

ALBERT BENTON JEWELL, to be Clinical Instructor in the Dental School, May 30, 1883.

EUGENE HANES SMITH, to be Clinical Instructor in the Dental School, May 30, 1883.

EDWARD CORNELIUS BRIGGS, to be Clinical Instructor in the Dental School, May 30, 1883.

GEORGE FRANKLIN GRANT, to be Demonstrator in Mechanical Dentistry, May 30, 1883.

VIRGIL CLARENCE POND, to be Demonstrator in Operative Dentistry, May 30, 1883.

HENRY PARKER QUINCY, to be Assistant in Histology, June 11, 1883.

EDWARD HICKLING BRADFORD, to be Assistant in Clinical Surgery, June 11, 1883.

FRANCIS HENRY DAVENPORT, to be Assistant in Gynaecology, June 11, 1883.

GEORGE MINOT GARLAND, to be Assistant in Clinical Medicine, June 11, 1883.

JOSEPH WEATHERHEAD WARREN, to be Assistant in Physiology, June 11, 1883.

WILLIAM WHITWORTH GANNETT, to be Assistant in Pathological Anatomy, June 11, 1883.

WILLIAM CARROLL EMERSON, to be Assistant in Chemistry, June 11, 1883.

SAMUEL JASON MIXTER, to be Assistant in Anatomy, June 11, 1883.

WALTER JOSEPH OTIS, to be Assistant in Anatomy, June 11, 1883.

ROBERT HENRY HARRISON, to be Assistant Surgeon of the Veterinary Hospital, June 25, 1883.

John Downer Pennock, to be Proctor, September 26, 1883.
Charles Pomeroy Worcester, to be Proctor, September 26, 1883.
Edward Southworth Hawes, to be Proctor, September 26, 1883.
Charles Austin Hobbs, to be Proctor, September 26, 1883.
Frederick Silas Gregory Reed, to be Proctor, September 26, 1883.

Julian Clifford Jaynes, to be Proctor of Divinity Hall, June 11, 1883.
Arthur Anderson Brooks, to be Librarian of the Divinity School, June 11, 1883.

William Gray, Henry J. Bigelow, and **Thomas G. Appleton**, to be Trustees of the Museum of Fine Arts for one year, from January 1, 1883, December 11, 1882.

The moderate increase in the number of students attending the University which the past eight years have witnessed has come, not from New England, but in the main from the Middle and Western States. The slow increase of the native population in New England, the efflux of enterprising young men and well-to-do families to the Western States and Territories, and the influx of foreigners, many of whom belong to the church of Rome, would cause, temporarily at least, a decline of the New-England colleges, were not these colleges fed more and more from the other States of the Union. Sixty years ago seventy-nine per cent of the students in the University came from New England; thirty years ago seventy-five per cent; three years ago seventy-two per cent; but now only sixty-seven per cent. During the past three years the percentage of students from Massachusetts has fallen from sixty-one and a half to fifty-four. Sixty years ago the Southern States contributed nearly one fifth of the whole number of students; but that section of the country, though greatly expanded in the mean time, now contributes only a little over three per cent. The following table exhibits the progressive increase in the percentage of students from the Middle and Western States.

	1820-21.	1850-51.	1880-81.	1883-84.
Middle	2.4	8.6	13.	10.8
Western	0.0	2.6	9.6	11.7

The most remarkable increase is that from the Middle States, and this increase is particularly striking in the College proper. More than one fifth of the College students now come from the Middle States. The number of graduates of the University who settle in the Middle and Western States has been rapidly increasing of late, many of them soon filling places of trust and influence. They exert themselves to improve the preparatory schools in their vicinity, or to found new ones; and by example and precept they suggest to young men that it is expedient to get thorough training for professional or active life. Conspicuous examples of the influence thus exerted by Harvard graduates have been seen in recent years in New York, Philadelphia, Buffalo, Cleveland, Cincinnati, Indianapolis, and San Francisco. It is an influence which not only benefits this University, but also improves the secondary and higher education in general throughout the country. Since about three hundred young men are now graduated yearly at the University, and are dispersed hence far and wide over the Union, and since the country becomes constantly more compact through the rapid extension and improvement of railroads and telegraphs, so that the situation of the University upon the eastern edge of the continent is less and less an obstacle to its growth, it is to be expected that the proportion of its students from beyond New England will continue to increase.

The number of special students in the University (students not candidates for a degree) increases, and is likely to increase; for all the privileges of University membership are open to them, except that of winning a degree and so gaining admission to the quinquennial catalogue.

Special Students in the	1880–81.	1881–82.	1882–83.	1883–84.
College	15*	34*	46	67
Divinity School	7	9	6	7
Law „	29	29	19	27
Scientific „	26	17	11	13
University	77	89	82	114

* Unmatriculated students.

The amount of the tuition-fees paid by special students during the current year will be about $16,000, and during the three preceding years the amount of these fees was on the average about $11,000 a year. The special students in the College proper are on the average nearly two years older than the Freshmen; and sixty-one per cent of them come from beyond New England. Of the sixty-seven persons registered in College as special students for the current year, nine are persons who failed in June or in September, or in both months, to pass the examinations for admission to the Freshman class, thirteen are present for a second year, and one for a third year. In all four of the departments included in the table every grade of scholarship, from very high to very low, is found among the special students. Upon this point interesting details are given in the report of the Dean of the College Faculty (p. 49). It will also be seen in the Dean's report that of the forty-two special students who completed the year 1882–83 in the College, ten were subsequently admitted to some College class. The provisions now made for special students are useful: 1. To persons who wish to devote themselves to single subjects, and do not care for a degree; 2. To young men of good parts who have been prevented from getting, at the usual age, the common training preparatory to college life; 3. To those who are physically unequal to the labor and competition of the regular course, but who can do well a smaller amount of quiet work; 4. To the slow and dull whose fathers can afford to give them the general advantages of a residence at the University.

As all these varieties of ability, purpose, and condition, are now represented in every degree among the special students, these students constitute, as might be supposed, a miscellaneous body of young men without common characteristics or common life. It was precisely to meet these diverse needs, which arise so naturally in the present condition of American society, that special students were admitted to the University. Among them have been found, in each of the last five or six years men of excellent capacity and character who were very poor, and who suffered, or failed, for that reason in their struggle for education. The University possesses no scholarships, or other beneficiary aids, accessible to persons who are not candidates for a degree. In so considerable a body of special students as is now in attendance, good use could be made of some endowments for aiding capable men, after suitable probation, in any of the various departments to which special students resort.

For many years a large proportion of the regular students in the Schools of Divinity, Law, and Medicine at this University have been graduates of Harvard College or of other institutions. At present nearly three fifths (238 out of 410) of the regular members of these Schools have previously taken academic degrees, one hundred and thirty-five at Harvard University, and one hundred and three at other institutions. On the other hand, the attendance of graduates in any number, whether of this institution or of others, for purposes of study outside of the regular classes of these three professional schools, was hardly witnessed here until within the past ten years, with the important but temporary exception that the Lawrence Scientific School, before 1867, generally contained from twelve to twenty bachelors of arts or science who were pursuing chemistry, engineering, comparative anatomy or zoölogy as specialties. During the past year seventy-nine graduates (48 of Harvard, and 31 of other institutions) were pursuing their studies here, not including graduates who were members of the regular classes in the three professional schools; and the catalogue of the current year exhibits ninety-eight such graduates (54 of Harvard, and 44 of other institutions). The following tables show

Persons studying here after taking degrees at other institutions (not including regular members of the three professional schools).	1871–72.	1874–75.	1877–78.	1880–81.	1881–82.	1882–83.	1883–84.
As candidates for the A.B. (members of the College classes)	..	5	7	2	12	18	16
As College special students	..	..	1*	1*	..	3	2
As resident graduates at the Divinity School	..	..	..	..	3	8	3
As Divinity special students	1	..	1	3	1	1	2
As Law special students	..	..	3	1	2	1	3
As Scientific students	3	..	..	1	..	..	..
As resident graduates not candidates for any degree	1	..	..	..	2	..	7
As candidates for the degree of A.M., Ph.D., or S.D.	..	2	7	4	8	5	11
Total	5	7	19	12	28	31	44

* Then called unmatriculated.

Harvard A.B.s and S.B.s pursuing studies here (not including regular members of the three professional Schools).	1871–72.	1874–75.	1877–78.	1880–81.	1881–82.	1882–83.	1883–84.
As Divinity resident graduates	*1	1	..	..	1	..	..
As Divinity special students	..	..	1	..	1	1	1
As Law special students	..	..	2	3	1	..	3
As Scientific students	3	6	..	2	1	..	..
As resident graduates not candidates for a degree	8	10	8	2	1	4	7
As candidates for the degree of A.M., Ph.D., or S.D.	2	38	44	30	33	43	43
Total	14	55	55	37	38	48	54

* University student of Theology.

the various ways in which these graduates of other colleges and of Harvard College have connected themselves with the University in every year since 1880 and at three periods taken three years apart before 1880.

These ways of entering the University are all open to graduates without any examination, except that a graduate of another institution who desires to enter the College as a candidate for the Harvard degree of Bachelor of Arts must satisfy the College Faculty as to his previous course of study and his proficiency therein, and that a graduate of another institution who desires to become a candidate for a degree higher than that of Bachelor must satisfy the appropriate Faculty that the course of study for which he received his Bachelor's degree (reinforced perhaps by extra studies) is equivalent to that for which the same degree is given in Harvard University. The tables show that good progress has been made within ten years in this important branch of the work of the University; but they also indicate that there is ample room for further development. The various and abundant instruction here offered has been made reasonably accessible to all persons who are able to profit by it, so far as regulations conceived in a liberal and hospitable spirit can make it accessible. There remain two hindrances to the growth of the graduate department, — in the first place, it is a new and comparatively unknown department, the privileges of which are as yet but little understood; and in the second place it possesses no scholarships or other beneficiary aids. An annual income of ten thousand dollars could be well used at once in scholarships for graduate students in arts.

The Academic Council early in the year 1883 adopted two new rules with regard to the Master's degree (see the report of the Secretary, p. 78) which are expected to increase considerably the number of suitable candidates for that grade. The first of the new rules provides that studies pursued in the Professional and Scientific Schools will be approved by the Council as constituents of the one year's course of liberal study which is required of every candidate for the Master's degree, on condition that the candidate do not count the same studies towards a professional degree; and the second provides that members of the Schools of Divinity, Law, Medicine, and Science, who are already Bachelors of Arts, may obtain the degree of Master of Arts simultaneously with their professional degree, if they pass the examinations of their respective Schools with high credit, and follow the longest course of study and residence provided for the professional degree. The first of these rules treats professional studies as liberal, and encourages young men to give one year to subjects selected from the professional school programmes, although they have no purpose of entering any profession. The second rule offers an inducement to the Law student, who is a Bachelor of Arts, to remain three years in the School rather than two, and to a Medical student who is a Bachelor of Arts to remain four years rather than three, and to all professional students, who have already taken the degree of Bachelor of Arts, to distinguish themselves at their examinations. The degree will thus be placed within the reach of a considerable proportion of the graduates of the University; yet the conditions upon which it is to be obtained are such as must command respect and furnish proper security against too ready bestowal. The degree will continue to be, — what it has been at this University since 1872, — good evidence that the recipient has made serious attainments in addition to those for which he received the Bachelor's degree in arts.

The College Faculty is the body in which almost all the considerable changes, made during the past sixteen years in the educational methods of Harvard College and of the schools which regularly feed it, have been first studied in detail, and then wrought into practical shape; and it is at present engaged, not for the first time, in the discussion of the gravest question of University policy which has arisen, or is likely to arise, in this generation, — namely, the extent to which option among the different subjects should be allowed in the examination for admission to College. Changes in the constitution of a body which exercises such functions are interesting for two reasons, — first, because they indicate in a general way the directions in which the College instruction has been developed, and secondly because they may affect far-reaching decisions upon questions of educational policy. The following table exhibits the constitution of the College Faculty on September 8, 1869, the last day of the summer vacation, three months and a half after the beginning of the present administration. It is to be observed that then, as now, several teachers, who gave instruction to undergraduates in important departments, were not members of the Faculty. In natural history, Professors Agassiz, Gray, and Wyman were regular teachers; in Italian and Spanish Instructor Nash, in music Instructor Paine, in philosophy Instructor Newell, and in mathematics Instructor Leverett gave stated instruction; but none of these gentlemen were members of the Faculty, and the departments of natural history and music had no representative in that body.

COLLEGE FACULTY. SEPTEMBER 8, 1869.

Greek	Professors	2	
	Tutor	1	3
Latin	Professor	1	
	Tutors	2	3
Mathematics	Professors	2	
	Tutor	1	3
Philosophy and Ethics	Professors		2
History	Professors	2	
	Tutor	½	2½

English	Professor	1	
	Tutor (elocution)	1	2
Modern Languages and Literature (not English)	Professor	1	
	Assistant Professor	1	
	Tutors	1½	3½
Physics	Professor	1	
	Tutor	1½	2½
Chemistry	Professor	1	
	Tutor	½	1½
			23

The next table exhibits the constitution of the Faculty fourteen years later, just before the beginning of the current academic year. Eight Instructors, who bear an important part in the departments of modern languages (2), English (2), physics (1), political economy (1), history (1), and mathematics (1) respectively, are not included in the table, because they hold annual appointments, and consequently do not belong to the Faculty.

COLLEGE FACULTY. September 26, 1883.

Greek	Professors	2	
	Assistant Professors	2	
	Tutor	1	5
Latin	Professors	3	
	Assistant Professor	1	
	Tutor	1	5
Classical Philology	Professor		1
Hebrew, Assyrian, and Arabic	Professors		2
Sanskrit	Professor		1
Mathematics	Professors	3	
	Assistant Professor	1	
	Instructor	1	5
Philosophy and Ethics	Professors	2	
	Assistant Professor	1	3
History and Roman Law	Professors	3	
	Assistant Professors	2	5
History of Art	Professor	1	
	Instructor	1	2

Music	Professor		1
Political Economy	Professor	1	
	Assistant Professor	1	2
English	Professors	2	
	Instructors	2	4
Modern Languages and Literature (not English)	Professors	2	
	Assistant Professors	2	
	Instructor	1	
	Tutor	1	6
Physics	Professors	3	
	Instructor	1	4
Chemistry	Professors	2	
	Assistant Professor	1	3
Natural History	Professors	4	
	Assistant Professors	2	
	Instructor	1	7
Physical Training	Assistant Professor		1
			57

The following statement of the number of teachers in the Faculties of 1869 and 1883 respectively, compared by departments, brings out some interesting facts; but it must be remembered that of twenty-two teachers in the Faculty of 1869, eight were tutors, while in the much larger Faculty of 1883, only ten were of a rank below that of assistant-professor.

Department.	Number of teachers.	
	1869.	1883.
Greek, Latin, and Sanscrit	6	12
Semitic	0	2
English	2	4
Modern languages	3½	6
Philosophy, ethics, and political science	2	5
History, Roman Law, and history of art	2½	7
Music	0	1
Mathematics	3	5
Physics and chemistry	3	7
Natural history	0	7
Physical training	0	1
	22	57

The new subjects represented in the Faculty of 1883 are Sanscrit, Semitic languages, Roman Law, history of art, music, natural history, and physical training, the first four of which are closely connected with the classical languages and literatures. The representatives of the new subjects being deducted, it appears that each department has about doubled its number of teachers during the fourteen years, the development being, on the whole, remarkably symmetrical. The department of natural history has made a greater relative gain than any other, partly because the professors in that department were not members of the old Faculty, and partly because the importance of the department as regards endowment, equipment, and quantity of instruction offered has greatly increased.

The June admission examinations conducted simultaneously at Andover, Exeter, New York, Philadelphia, Cincinnati, Chicago, St. Louis, and San Francisco, answer a good purpose, and cost but little. The expenses attending them in June last amounted to $982.01, and the receipts from fees amounted to $635. The number of candidates examined at these places was eighty-six for the final examination and eighty-seven for the preliminary, distributed as follows: —

	Andover.	Exeter.	N. York.	Phila.	Cincinn.	Chicago.	St. Louis.	San Fran.
Final examination . . .	5	31	21	10	7	4	3	5
Preliminary examination .	9	22	28	9	5	5	2	7

This method of carrying the examination-papers to the candidates, instead of obliging all candidates to travel to Cambridge, only dates from 1876, when examinations were first conducted at Cincinnati; having proved practicable and serviceable, it has been gradually extended, and bids fair to become the normal method for large academies, and for cities which possess schools capable of preparing boys for this University.

For several years past a considerable number of candidates for admission have been examined, who, when admitted, did not become students in the University. This number has been year by year increasing until last summer it reached fifty-six, of whom not more than half have any intention of entering the University at a future time (see the Dean's report, p. 54). Twenty-two of the fifty-six have already connected themselves with other institutions. In giving these persons a thorough examination the College renders a gratuitous service, partly to them, and partly to the schools from which they come; and it will continue freely to render this service until the labor which these examinations impose upon it becomes unreasonably heavy. If there prove to be an increasing demand for this service — as is not unlikely — it may ultimately become expedient to charge a fee for the admission examination at Cambridge as well as at the other places of examination. It is obviously convenient that all the boys in the first and second classes of a well-organized school should aim at passing the Harvard examinations, although some of them may not be going to Harvard College, and some are not going to college at all. Again, every ambitious pupil in the graduating class of a school or academy desires, for his own credit, to pass all the examinations which his comrades are passing, lest some one should imagine him to be less capable or less faithful than his fellows; and the more reputable the examinations the stronger will be this desire. The College recognizes the force of these motives, and has thus far made no objection to examining for admission persons who have no definite intention of entering the University.

In the following table a comparison is instituted upon certain points between six good and large schools which habitually send boys to Harvard College, two of the number being endowed schools, two public schools, and two private schools. The statistics cover a period of eight years for the private schools, and of ten years for the others.

	Percentage of candidates who entered without conditions.	Percentage of candidates who entered with not more than two conditions.	Percentage of boys who graduated at College in the first half of their respective classes.
1.	55.	81.1	54.1
2.	50.5	75.1	58.
3.	44.2	73.8	39.2
4.	42.1	61.4	32.6
5.	35.3	59.	50.5
6.	32 9	57.6	57.2

These schools, all of which are deservedly held in high estimation, differ very much in the results they attain at the admission examinations, but even more in regard to the College standing of their graduates. The boys from three of these schools stand at the end of the College course decidedly above the average in their respective classes, from two of them much below the average, and the boys from the sixth school have just the average standing, half of them being in the first half of their respective classes. The facts prove that there is not so sure a connection between good work as a schoolboy and good work as a college student as there ought to be, many of the ill-prepared boys surpassing during college life many of the well-prepared. In the freedom of college life differences between individuals in respect to ambition, strength of will, physical and mental alertness, and habits created by luxury on the one hand or poverty on the other, produce much greater effect than they do among boys who are under constant observation and pressure at school.

Intercollegiate contests in athletic sports demand further regulation by agreement between the colleges whose students take part in them. They are degrading both to players and spectators if conducted with brutality, or in a tricky or jockeying spirit; and they become absurd if some of the competitors employ trainers, and play with professional players, while others do not. The opinion of the authorities of Harvard College upon this subject is perfectly distinct; they are in favor of forbidding college clubs and crews to employ trainers, to play or row with "professionals," or to compete with clubs or crews who adopt either of these practices. They are opposed to all money-making at intercollegiate contests, and to the acceptance of money or gratuitous service from railroads or hotels, and therefore to all exhibitions or contests which are deliberately planned so as to attract a multitude and thereby increase the gate-money. In short, they believe that college sports should be conducted as the amusement of amateurs, and not as the business of professional players. The distinction between amateur and professional players is one easily made and easily maintained, as the experience of the numerous amateur athletic associations in this country and in Europe abundantly proves. The opposite view is that all games should be played to win, and that whatever promotes winning should be done, — that the best trainers should be employed, and the most expert professional clubs be hired to play with college clubs, and to meet these expenses that the largest amount of gate-money and the largest subsidies from railroads and hotels should be sought for in a business-like way. Between these opposing views there seems to be no tenable middle ground; whoever tries to occupy an intermediate position soon finds himself pushed to one extreme or the other. It should be observed that the evils and excesses which now need to be checked have grown up in connection with intercollegiate athletic contests, — contests which attract undue public attention, but in which only a few persons from each college actually participate, — and that they have no tendency to weaken the force of the arguments in favor of promoting physical exercise and manly sports among college students.

In general, the department of hygiene and physical training is in good condition; the Hemenway Gymnasium is more used, and more intelligently used every year; and during the spring and fall the river and the ball-fields invigorate and refresh hundreds of young men who will greatly need in their after lives all the strength and soundness here acquired or preserved. As evidence of the increasing resort to the Gymnasium it may be mentioned that the number of lockers originally deemed sufficient was 474, and that lockers to the number of 357 have since been added to the original provision. Many lockers are used by two students in common. The site of the new Physical Laboratory having encroached upon the former foot-ball ground, the Corporation, by a grant of $1,000, helped the Athletic Association to grade the northerly portion of Holmes Field, and to prepare there a new ground for ball games and a new running track. The Association procured the rest of the money needed for these purposes. Two additional provisions for physical exercise and recreation are still needed at Cambridge, namely, a swimming-bath, and enclosed tennis courts.

It appears from the Dean's report that the programme of elective studies prepared by the College Faculty in the spring of 1883 for the year 1883–84 offers a larger amount (373 exercises per week) and greater variety of instruction than ever before (p. 76). The most considerable gain was in the important department of Political Science. Professor Dunbar having retired from the laborious office of Dean, and having returned refreshed from a year's vacation in Europe, was able to add one course and one half course to his previous work; and through the generosity of Henry Lee, Esq., of Boston (see Treasurer's Statement, p. 11) the Corporation was enabled to appoint an assistant professor in the department. The results are that fourteen and a half hours of instruction in political science are now given each week against seven hours per week in each of the two preceding years, and that the resort of students to the department has greatly increased. The range of choice of studies now offered to the Harvard undergraduate may be inferred from the fact that no undergraduate is expected to attend during the last three years of his college course more than one tenth of the elective instruction which the College provides, the requirement for the degree being twelve exercises a week, and the amount of instruction given being three hundred and seventy-three exercises a week. The Dean calls attention (p. 72) to the advantages freely offered to students and other residents of Cambridge in the large number of public lectures and readings given at the University each year by scholars eminent in their respective departments. In 1882–83 the number of such lectures was one hundred and twelve, and the number of readings forty-three.

In pursuance of the general policy of the Divinity School to put fairly before its students, so far as its resources permit, the various theological opinions which prevail in the different Protestant denominations, Professor George T. Ladd, D. D., of Yale College, was invited to give a course of eight lectures before the School in the spring of 1883 on the doctrine of inspiration; and the course was given by this eminent teacher and author with great acceptance in the month of April. At about the same time Rev. J. Henry Thayer, D.D., lately a professor in the Andover Theological Seminary, was appointed Lecturer on Biblical Theology for the ensuing academic year, and he is now delivering a course of weekly lectures on the doctrines of sin and redemption, as taught in the New Testament.

The number of students continues to be small, but their quality has greatly improved under the stringent regulations adopted during the past few years, and now leaves little to be desired. They come from several denominations, bringing hither a good preliminary training, and manifesting while here an ardent desire for sound scholarship, and a sincere enthusiasm for truth, religion, and their humane calling. The ample scholarships which are at the disposal of the Faculty are awarded for merit and need without any reference to the opinions of the applicants, and it has happened of late that students of evangelical opinions have carried off a large share of the best scholarships.

The Dean of the School describes in his report (p. 86) the limited option among the subjects taught by the members of the Divinity Faculty which it was last year decided to permit to candidates for the degree of Bachelor of Divinity. It seems probable that the liberty of choice thus introduced will gradually be widened, and perhaps be extended to appropriate subjects taught by professors in other departments of the University. Under the existing regulations with regard to admission, candidates for the degree of Bachelor of Divinity are likely to be already Bachelors of Arts. They will therefore be presumably eligible for the degree of Master of Arts or of Doctor of Philosophy; and if the conditions under which these degrees may be sought are more attractive than the conditions under which the degree of Bachelor of Divinity must be sought, they will prefer to become candidates for the degree in arts or philosophy rather than for the degree in divinity. The degree of Bachelor of Divinity gets little artificial protection; for churches cannot be relied on to demand it of all young candidates for settlement.

Divinity Hall has been made, by judicious repairs and improvements during the past two years, a pleasant and convenient building. The grounds about it are now kept in good order, and the extension of the University northward has made it seem less isolated than formerly. Accordingly the chambers in the Hall are in demand, and for the first time in many years they are all let. The reference library of the School occupies several chambers on the lower story. A separate fire-proof building is needed for the proper storing of this valuable collection; and the same building might well contain a small reading-room, and a museum into which should gradually be gathered maps, models, and photographs to illustrate Biblical studies, casts of cuneiform inscriptions, and other objects of philological or archaeological interest.

The year 1882-83 was not a prosperous one in the Law School. The number of students was not so large by twenty as in the previous year; Professor Thayer was in Europe on vacation, and his place was temporarily filled by three younger instructors; Professor O. W. Holmes, Jr., who had been appointed in January, 1882, and had begun to teach at the opening of the School in October, resigned his chair in December, and it became necessary to divide the work which he had assumed among the other three professors; and finally in spite of watchful economy the expenses of the year exceeded the receipts by $1,674.46. After much discussion in the Faculty and the governing boards the vacancy in the Faculty created by the resignation of Professor Holmes was filled in June last by the election of William A. Keener, Esq., of New York, to an assistant professorship. Mr. Keener graduated at the Law School in 1878, and had been for five years in practice in the city of New York. From the first, however, he preferred the life of a student and teacher, had embraced all opportunities to teach law, and had given decided promise of success as a teacher. The appointment was of a kind less common in the law schools of the United States than in those of Europe; but its results have already proved satisfactory.

At the close of the summer vacation the very handsome and commodious building which the school owes to the munificence of Edward Austin, Esq., of Boston, was ready for occupancy, although not quite finished on the outside. The law library was moved thither in the last weeks of September, and lectures began there on the first of October. It would be hard to exaggerate the advantages which the School derives from the possession of this admirable building. The reading-room, which is the chief resort of the students, is a noble room, light, airy, and handsomely furnished; the book-room is fire-proof, well-lighted, and capacious enough to hold the present library and the probable accessions of fifty years; the lecture rooms are well ventilated; the rooms for the Dean and Librarian are ample; and the locker-rooms and other provisions for the convenience and comfort of the students are sufficient for present needs and capable of extension. Internally and externally Austin Hall is very substantially constructed; and it is by far the most ornate building which the University possesses. The architect was Mr. H. H. Richardson, to whom the University owes the design of another much admired building, Sever Hall; and the committee of the Corporation in charge of the undertaking was the Treasurer, Mr. Hooper, to whose good judgment and care in supervising the work the School is much indebted.

The new book-fund ($32,021.25), to which many members of the profession handsomely contributed, is a very useful addition to the resources of the School.

The current year opened favorably with the full staff of five resident teachers, and an increase of fourteen in the number of students; but it is very evident that, with its present scale of expenditure, the School needs an additional endowment of at least $100,000, the income of which should be applicable to salaries.

The completion of its new building was the event of principal interest to the Medical School in 1882–83. The cost of the building, with all its fittings and furniture, is (31 December, 1883) $237,465.38, to which must be added $83,950.24 (April, 1880) as the cost of the land, including expenses incidental to the purchase, making a total of $321,415.62. The lot of land is large enough for two buildings of the size of the present structure, and the new building would accommodate a school twice as large as the present School; so that a prudent provision has been made for the growth which may reasonably be anticipated. Great pains have been taken to adapt the building, not only in its main features, but in every detail, to its destined uses. A committee of the Medical Faculty supervised the preparation of the plans, and watched over their execution; the architect of the building, Mr. Henry Van Brunt, elaborated with much patience and care, under the guidance of the professors most nearly concerned, the complicated and numerous flues and drains, the water, steam, and gas pipes, and the counters, sinks, and cabinets, which were required in the numerous laboratories, and the peculiar fittings and furniture of the lecture-rooms and preparation-rooms. As the work advanced, the committee of the Faculty held frequent stated meetings at the building, and from the beginning gave their time and labor without stint. The result is a spacious and convenient fire-proof building which is thoroughly adapted in all respects to the needs of the teachers and students who are to use it.

In May last a fire broke out late in the evening in the floor of the principal lecture-room on the second story. The floor was of wood, and rose in steps, upon which had been built high-backed wooden benches. The fire was soon intensely hot, and there was delay in getting water, so that everything in the room which could burn was completely destroyed, and much superficial damage was done all over the building by the heat and smoke; but the fire did not get beyond the room in which it originated, the solid wooden floor of the lecture-room over the room in which the fire occurred being perfectly protected by its tight envelope of plaster on wire lathing.

The building was begun in June, 1881, and its construction took six months longer than was expected. So many additions and improvements were made during the progress of the work that the building cost, with its furniture, $30,000 more than it was expected to cost at the start. Nevertheless the savings made by the School since 1875 ($70,875.13) will be drawn upon to only a moderate extent in paying for furniture and fittings. The land and building are the fruit of two public subscriptions, — the first made in 1874–75, and the second in 1881, — with the interest which accumulated thereon. Both these subscriptions were raised with noticeable ease. It seemed as if the community were all ready to give, — as if medical education were recognized at last as a peculiarly interesting and promising object for endowment, — interesting, because of the universal pressure of the evils with which medicine contends, and promising, because the astonishing achievements of medical science and skill within the past forty years give such earnest of further relief for mankind from pain, disease, and misery. Now that an adequate building has been provided, it is desirable that the attention of persons who wish to improve medical education, or promote medical research, should be directed to professorship funds, scholarship funds, and funds for maintaining laboratories devoted to instruction and investigation. The needs in these directions are many and urgent; for example, the University has no professorship of public health, or preventive medicine, — a modern subject of great importance which can be properly dealt with only through an endowed professorship, because the professor, if properly devoted to his subject, would be cut off from private practice. It would be a great service to humanity to divert even a tithe of the money annually given to charities of pauperizing tendency towards the promotion of medical teaching and research.

The Medical School has been painfully reminded during the past two years, by resignations, sickness, and death among its senior professors, that the only way to keep its Faculty strong is to admit young men of promise freely to subordinate positions in which merit and power can be exhibited, and then to advance the most successful teachers among them as rapidly as possible to places of responsibility. The vacancy created by the resignation of Dr. Holmes in November was filled in June by the election of Dr. Thomas Dwight to the professorship of anatomy, after careful inquiry had been made both in Europe and the United States for available candidates among anatomists of reputation. When Dr. Ellis resigned the office of Dean, Dr. Fitz also retired from the office of Secretary of the Faculty, the duties of which he had discharged with great diligence and efficiency for ten years. At the end of June, Dr. Henry P. Bowditch was chosen Dean by the Corporation and Overseers, and Dr. William F. Whitney was subsequently appointed Secretary by the Corporation. The administration of the School thus passed into the hands of younger men whose relation to medical teaching and the medical profession is somewhat different from that of their predecessors, because neither of them is a practising physician, but from whom there is every reason to expect an equal devotion and an equal success in the conduct of the School.

The Dental School has made in three years a substantial gain in the number of its students.

	1880-81.	1881-82.	1882-83.	1883-84.
Number of students,	18	21	25	30

The past year was one of some embarrassments, because of the vacancy in the professorship of operative dentistry, and of the interruption of work in the Dental Infirmary caused by the rebuilding of the out-patients department of the Massachusetts General Hospital; but on the whole the work of the year was successful, the income of the School increased, its debt was diminished, and the payment of small salaries to its professors was resumed after an interval of five years. In January last, Dr. Thomas Fillebrown, of Portland, a member of the first class which graduated at the Dental School (1869), was chosen Professor of Operative Dentistry, and in May following Dr. Charles A. Brackett, of Newport, Assistant Professor of Dental Therapeutics, was promoted to the long-vacant chair of Dental Pathology and Therapeutics. The School therefore entered upon the current year with a complete and strong Faculty.

There is no department of the University which has a heartier support from its own graduates than the Dental School. They know its struggles, needs, aims, and deserts, and they give every possible assurance of their belief in its present and future usefulness. The School has also a European reputation, attracting more students from abroad than any other department of the University. Nevertheless, after fifteen years of existence, it has no property whatever, except a few chairs and implements, and a fund of $955.00 (Aug. 31, 1883), which has been chiefly contributed by its own young graduates. Were it not for the continued hospitality and assistance of the Medical School, it could not be maintained.

The Faculty of the School of Veterinary Medicine was organized during the year 1882–83, and the first annual report of its Secretary will be found below (p. 106). An excellent hospital situated on Village Street, Boston, was built and equipped during the spring and summer, and was occupied before the close of the academic year, thanks to the energy and good judgment of Professor

Lyman, and to the generous and judicious assistance of the Trustees of the Massachusetts Society for Promoting Agriculture, of Dr. William F. Whitney, and of Mr. Henry L. Higginson. By arrangement with the Medical School and the Bussey Institution, the Veterinary School was made a permanent guest of these two departments, and its students were made welcome to their lecture-rooms and their classes. At the beginning of the current year eleven candidates offered themselves for admission to the School, of whom nine were accepted.

The operations of the Department are necessarily confined for the time being almost entirely to the treatment of paying patients; but it is the desire of the surgeons to conduct a free clinique on an adequate scale as soon as possible. So strong is now the affectionate and compassionate feeling of many persons towards domestic animals, so important are the questions of public health with which veterinary science deals, and so vast are the pecuniary interests of the community in horses, neat cattle, and other live-stock, that this new department of the University finds many cordial friends, and will ask, at the proper time, for suitable endowment with fair chance of obtaining what it needs.

Instruction was given as usual at the Bussey Institution during 1882–83, except that Professor Lyman gave, for that year only, the course heretofore given by Professor Slade. The Corporation adopted in May last a new measure in regard to the carrying on of the Bussey Farm. Since the trust requires that the Farm be kept in good condition, it has been the practice of the Corporation to sell the standing grass and apply the proceeds to the purchase of manure. They have now appointed Mr. D. T. Hinckley, a graduate of the Institution, superintendent of the Farm, expecting him to get the best possible crop of hay from the estate, and to take horses and other animals to board in the large barns on South Street, which have been standing empty for many years. The establishment of the Veterinary School and Hospital was the occasion of this change of plan with regard to the Bussey Farm; for it was obvious that the Veterinary Department could use the commodious buildings and yards at the Farm for convalescents and chronic cases with great advantage, and, on the other hand, that boarders coming from the Hospital would help consume the hay on the Farm. The expectations with which the change was made have thus far been fairly fulfilled; but several years will be required to develop the full effects of the new policy.

For several years past the average annual expenditure in the Library, apart from money paid for books, has been $20,000, — a large sum which is taken from the College tuition-fees. Yet this heavy expenditure has not availed to keep the cataloguing abreast of the accessions of books and pamphlets, beside meeting the cost of service and administration. The report of the Librarian for 1882–83 states (p. 113) that 6,000 uncatalogued titles from the accessions of recent years have already accumulated. Persons who are not familiar with the administration of the Library are apt to attribute far too large a part of the annual expenditure to the cataloguing department, and therefore to complain that the cost of ordering a book, and getting it placed in due course upon the Library shelves ready for use, bears too large a proportion to the cost of the book itself. But less than half of the total expenditure in the Library, excluding the purchase of books, is connected in any way with the cataloguing of books and pamphlets. From the total of $20,000 the following items must be deducted as regular expenses incident to carrying on the establishment: —

Salary of the Librarian	$4,000.00
Bulletin and other printing	1,250.00
Binding (the portion done in this country)	1,250.00
Fuel, cleaning, stationery, postage, repairs, &c.	2,500.00
Wages paid for service of books and attendance	2,000.00
Total	$11,000.00

There remain $9,000 with which to meet the cost of ordering $15,000 worth of new books each year, receiving and collating the books thus bought and all books given to the Library, keeping the money accounts, cataloguing all accessions, and placing them on shelves in their proper classes. When it is remembered that two or three persons possessing extensive scholarship and good judgment must be employed in this part of the Library work, and that all the labor must be skilled labor, $9,000 will appear a moderate expenditure for the purposes above described. At the present rate of expenditure all hope must be abandoned of making any progress in recataloguing the thousands of books, received before 1860, which have never been entered upon the short-card catalogue then begun.

It is very desirable that a plan should be made for finishing the catalogue which was begun in 1860 in a given number of years, by adding to the annual expenditure for cataloguing, and gradually increasing the force employed, until it can catalogue all accessions and a predetermined number of old titles each year; and then that this plan, once adopted, should be firmly adhered to until it is executed. Changes in the staff employed in cataloguing, and particularly alternate enlargements and reductions of the force employed, are very wasteful; for practice and an intimate acquaintance with the catalogue are essential to efficiency in the work. There is some hope that such a plan may be entered upon during the current year.

The Librarian states convincingly the objections to such benefactions as those of the late Joseph J. Cooke of Providence, who gave $5,000 to each of ten libraries, provided that they should spend the money in buying books at the auction sale of his library after his death. The Library succeeded in obtaining at the sale books to the amount of $5,000 at prices not very much above their market value; but the method creates an artificial competition which hurts the sale for other buyers, and impairs in the beneficiaries the sense of obligation to their benefactor.

A report upon the Herbarium by the Director, Professor Asa Gray, is included for the first time in this Report (p. 114). The Herbarium is one of the most interesting and valuable of the scientific collections belonging to the University. It is one of the permanent fruits of Professor Gray's long and diligent life as a systematic botanist, and of his recognized position as the highest authority in the world upon the flora of North America. The strongest impression received on reading this first annual report is, that two such learned men as Dr. Gray and Dr. Watson ought not to be giving their precious time to the examination of the multifarious collections which are incessantly poured in upon them, and to the selection and preparation of such specimens as the Herbarium lacks, — particularly when unfinished works of great importance, which no one else can execute so well, are waiting for completion at their hands. This first impression will be somewhat modified by the subsequent reflection that some part of the work thus done for the Herbarium, and for the collectors and contributors who constantly enrich it, is work which demands the most comprehensive knowledge and the largest experience; but the conviction will remain, that the Director and Curator ought to be furnished with as much skilled assistance as they can possibly employ for the less difficult parts of their work, to the end that their own time may be devoted, as far as possible, to investigation and authorship. It will be seen in the report of the Director that the Trustees of the Massachusetts Society for Promoting Agriculture, who contributed effectively to the establishment of the professorship of natural history in 1805, and of the Botanic Garden in 1807, still give their intelligent and liberal support to the botanical department.

The report of the Director of the Botanic Garden (p. 116) shows a prudent and economical administration directed mainly to the repair of damages caused by drought and decay, to the increase of the Museum, to the systematic arrangement and exhibition of those living plants which are of interest to students of systematic and economic botany, and of vegetable morphology and physiology, and to the promotion of botanical investigations.

On the 30th of December, 1882, an important indenture was executed between the Board of Park Commissioners of the City of Boston and the President and Fellows of Harvard College (see Appendix I.) concerning the use of the Arnold Arboretum as a public park. Under this contract the City acquires gratuitously for the purposes of a public park about one hundred and twenty acres of land, beautifully diversified, and in part handsomely wooded, upon which the University is to maintain a collection of all the trees and plants which will live in the open air at West Roxbury. The University, on the other hand, gains security in the uninterrupted execution of the Bussey and Arnold trusts on the tract taken by the commissioners, permanent exemption from taxation on this tract, the construction by the City of roads enough to give suitable access to the whole Arboretum, the maintenance of a police sufficient to protect the collections and plantations, and security against the laying out of streets or railways through or over any part of the Arboretum without the consent of the President and Fellows. It is believed that this contract will prove very advantageous both to the City and the University. The management of the Arboreturn as a scientific establishment, and as a collection o living trees, shrubs, and herbaceous plants, remains in the hands of the President and Fellows, and the admission of the public at reasonable hours and under proper regulations will only add to its usefulness as a means of instruction. The City began to build the roads through the Arboretum last July. The Director of the Arboretum reports (p. 137) that the large collections of plants which ave accumulated during the past ten years are in a flourishing condition.

The report of the Director of the Chemical Laboratory directs attention to the large number of students who worked in the department (208), to the continued productiveness of the Laboratory in chemical researches, to the usefulness of the summer courses carried on by Dr. Mabery, and to the increase of the mineralogical collection. At the end of the year the Laboratory lost its two principal assistants, — Dr. Charles F. Mabery being appointed to a professorship in the Case School of Applied Science at Cleveland, and Dr. Leonard P. Kinnicutt to a professorship in the Worcester Free Institute. The simultaneous withdrawal of these two gentlemen was a serious loss; but, on the other hand, such promotion of its assistants is serviceable and honorable to the Laboratory in which they were trained.

The work of the Observatory in 1882–83 is fully set forth in a very interesting way in the annexed report of the Director (p. 122). It is obvious that all the resources of the establishment in instruments and money were intelligently and economically employed, and that its influence, usefulness, and reputation are increasing from year to year. The effort to replace the annual subscription of $5,000, which expired in 1883, by the income of a permanent fund of $100,000 was only partially successful, — a fund of $50,000 being the result of the persistent exertions of the Visiting Committee of the Observatory.

It will therefore soon be necessary to reduce the annual expenditures by about $2,200, unless further contributions to the permanent endowment are received.

Whoever desires to understand the development of instruction in zoölogy and geology at the University since 1873, and the progressive increase of interest in biological and geographical studies among the students, should read the concise report for 1882–83 of the Curator of the Museum of Comparative Zoölogy (p. 139), in which he describes the growth of the establishment during the past ten years. It appears from this report that $900,000, in addition to the current expenditures, have been devoted to the Museum since 1873, of which sum $500,000 have been used for building and for the purchase of collections, and $400,000, including the Sturgis-Hooper fund, have gone to increase the permanent endowment. The $500,000, which have been spent outright for building and for collections, have not been wastefully or carelessly expended; on the contrary the building is severely plain, its furniture and cases are constructed for service only without regard to appearance, and every purchase of a collection has been made with deliberation and under circumstances favorable to the purchaser. At the end of the year 1882–83 three laboratories for students in biology, three for students in geology and palaeontology, two private laboratories for instructors, and one large lecture-room, were completed at the Museum, and are now occupied by the instructors and students in these departments. Such a munificent provision of the means for instruction in natural history has, of course, brought about a decided increase in the amount of biological and geological instruction, both elementary and advanced, offered by the University, and in the number of graduate and undergraduate students who elect natural history courses. Since no other department of instruction has received such re-enforcement within the same period, or any furtherance at all resembling the support given to natural history by the development of the Museum, the relative weight or influence of the department of natural history in all University affairs has inevitably and properly increased. The arrangement of the exhibition-rooms advances steadily, and the productiveness of the Museum as a place of of biological research is fully maintained.

The average weekly membership of the Dining-Hall Association ranged in 1882–83 from 619 in the first third of the year to 487 in the last third, the average membership for the whole year being 546. In the preceding year the Directors had difficulty in keeping members enough in the Association to carry on the Hall; but in 1882–83 the number of members was satisfactory throughout the year. Nevertheless, upon evidence that dissatisfaction existed in the Board of Directors, Mr. Balch, who had been Steward since January, 1876, sent in his resignation, which was accepted by the Corporation at the end of the year. Late in the summer Mr. J. J. Sullivan was appointed Steward, and the Association began the current year with a large membership and every evidence of prosperity. In nine years the Hall has had two Stewards, of whom the first served two years and four months, and the second six years and eight months. The following table exhibits the fluctuations in the price of board at the Hall during the nine years of the existence of the Association: —

	1874–75.	1875–76.	1876–77.	1877–78.	1878–79.	1879–80.	1880–81.	1881–82.	1882–83.	1883–84.
First half-year	4.60									
Second half-year	4.85									
First third of year		4.50	4.80	4.10	4.00	4.10	4.40	5.00	4.46	4.16
Second " "		4.80	4.50	4.00	4.00	4.10	4.40	5.00	4.58	
Third " "		5.00	4.15	4.00	4.20	4.24	4.60	4.54	4.40	
Average price of year	4.42½	4.76⅔	4.48⅓	4.08⅓	4.06⅔	4.11⅓	4.46⅔	4.84⅔	4.48	

The Dining-Hall Association may now be considered one of the established institutions of the University; for its organization and methods have been tested by time. It is of great service in several ways; — first, by providing a substantial diet at a low price for students who wish to live inexpensively; secondly, by keeping down the price of board at other places in Cambridge; thirdly, by facilitating the formation of new acquaintances; and fourthly, by exerting a strong influence, through its democratic constitution, against all provincialism.

The President and Fellows have observed with great satisfaction the beginning of what they trust will prove a flow of unrestricted bequests, — in 1879–80 the modest bequest of Rev. Daniel Austin of Kittery, in 1880–81 that of John C. Gray of Boston, in 1882–83 the very considerable bequest of George B. Dorr of Boston, and recently that of Henry T. Morgan of New York. The reiterated statement of the many objections to minute restrictions upon the use of endowments intended to be permanent has apparently taken effect upon the public mind. But lest reluctance to restrict the application of an intended benefaction should sometime cause the diversion of bounty to other channels, it may be well to point out that there are many restrictions which are not practically inconvenient. Thus the designation of a comprehensive object like salaries, scholarships, maintenance of laboratories, or administration and service in the Gymnasium, Chapel, Library, or Dining Hall, has never been found inconvenient. Again the selection of some one department of the University, — such as the Observatory, the Law School, or the Veterinary School, — for the general benefit of which the giver desires his gift to be used, cannot give rise to any embarrassments. Neither are specific interdictions objectionable, if not too broad. Thus the Museum of Zoölogy has no difficulty in conforming to the direction that no part of the income of the Gray Fund shall be used for repairs of real estate; and John B. Barringer's order that no part of the income of his fund shall be used for prizes does not make his benefaction less useful or less welcome. The designation of a preferred application, failing which the application is to be at the discretion of the President and Fellows, can give trouble only when the preferred application is eccentric or difficult of discovery. In short, while unrestricted gifts must be for many years to come peculiarly welcome to the President and Fellows, there are many natural wishes, preferences, predilections and even prejudices of benefactors which may find expression in their gifts without impairing the value of those gifts to the University.

Among the gifts of the year which are acknowledged in the Treasurer's Statement (p. 9) is a fund of about $60,000, raised by subscription, the income of which is to be applied to the increase of the President's salary. The President and Fellows gratefully accept this generous gift, believing that increase of salary will add to the dignity and attractiveness of an office which has already great privileges, if also serious perplexities and responsibilities.

It is the general purpose of the Corporation to spend every year all their income. They believe that well-instructed young men are the best investment or accumulation which the University can make from year to year for the benefit of future generations. As fast as new resources are placed in their hands, whether from increase in the amount of tuition fees, or from the income of new endowments, the Corporation incur new permanent charges. Experience has shown that new buildings will be provided by gift nearly as fast as they are needed; but that enlargements, improvements, and repairs fall upon the Corporation. Unexpected calls for expensive improvements or repairs are apt to cause deficits, as in the years 1879–80, 1880–81, and 1881–82. The purchase of land in Cambridge also falls chiefly upon the Corporation, and during the past twenty years purchases to a considerable amount have necessarily been made,—whence that undesirable item among the general investments called "unoccupied lands," an item which the Corporation are constantly trying to reduce, and have reduced since 1879 by $32,399.70. The financial policy proper to a University is, of course, entirely different from that of a corporation whose final object is to make money; it should be conservative in regard to the preservation of capital, but free in regard to the prompt and complete expenditure of income. For the future enlargement of their resources the Corporation rely upon the increase in the number of students and the influx of gifts.

The lucid statement of the Treasurer needs no comment, except perhaps the single remark that the increase of the quick capital (p. 3) would appear much larger than it does, were it not for the withdrawal of building funds, temporarily in possession of the Treasurer but spent during the year.

When the act of 1865 gave to the Alumni the power of electing the Overseers, it was imagined that the electors, the larger part of whom would be young men, might choose a youthful and inexperienced board. The actual result has been quite the reverse. Only one of the present Board is under forty, only ten of the thirty elected members are under fifty, and the average age of the elected members is fifty-seven. No member of the Board graduated in arts later than 1866, and on the average the Board may be said to have graduated more than thirty-five years ago, at a time when the University was very unlike the institution of to-day. Such elderly men may be distinguished representatives of the Alumni, and may, perhaps, be in position to enjoy the advantage of advice from sons or grandsons now or recently members of the University; but their personal recollections of College life are less serviceable to them as University legislators than the recollections of much younger men would be.

The usual information concerning the number of students, and the honors, prizes, and degrees given in 1882–83, together with a list of the examining committees appointed for that year by the Board of Overseers, will be found in the Appendix (II.–VI.). The attention of the Overseers is respectfully invited to the following reports from the Deans of the several Faculties, the Secretary of the Academic Council, the Librarian, the Directors of the Herbarium, Botanic Garden, Observatory, Chemical Laboratory, and Arnold Arboretum, and the Curator of the Museum of Comparative Zoölogy.

CHARLES W. ELIOT, *President.*

CAMBRIDGE, Jan. 4, 1884.

REPORTS

OF THE

DEANS OF THE FACULTIES, THE SECRETARY OF THE ACADEMIC COUNCIL, THE LIBRARIAN, THE DIRECTORS OF THE HERBARIUM, BOTANIC GARDEN, OBSERVATORY, CHEMICAL LABORATORY, AND ARBORETUM, AND THE CURATOR OF THE MUSEUM OF COMPARATIVE ZOÖLOGY.

To the President of the University:

Sir, — I have the honor to submit the following report on the administration of the College during the academic year 1882–83.

At the beginning of the year the whole number of students was nine hundred and thirty-one, distributed as follows: —

Seniors	203
Juniors	210
Sophomores	208
Freshmen	264
Whole number of undergraduates	885
Special Students	46
Total	931

Of the Seniors, one died early in the year, and another was obliged to leave on account of ill health. All the rest completed their course, and for the first time in many years no Senior failed to graduate with his class by reason of deficiencies of scholarship. Two former members of the class, whose work completed at the beginning of the year had only entitled them to be classed as Juniors, succeeded in making up their deficiencies and obtained their degrees; and two other Juniors, who had been permitted, for special reasons, to do the work of the last three years of the course in two years, were likewise admitted to the degree. The net result was a graduating class of two hundred and five.

The number of Seniors who graduated at each commencement of the last seven years, with the number of failures in each class due to deficiencies of scholarship, is shown in the following table: —

	1877.	1878.	1879.	1880.	1881.	1882.	1883.
Graduated	170	144	189	162	182	177	203
Failed, but can make up . .	17	11	5	6	9	7	..
Failed, and must repeat the year	2	4	..	..	..	..	..

Four of those who failed in 1882, three who failed in 1881, and one who failed in 1876, made up their deficiencies at the examinations of last year; and these eight, together with one member of the class of 1882, who, for persistent neglect of the regulations, had been refused his degree with his own class, were recommended for the degree out of course.

The numbers of the three classes of last year which are still in college, and their aggregate losses and gains, from October, 1882, to October, 1883, are as follows: —

	Present, October, 1882.	Loss.	Gain.	Present, October, 1883.
Class of 1884	(Juniors) 210	12	12	(Seniors) 210
Class of 1885	(Sophomores) 208	25	12	(Juniors) 195
Class of 1886	(Freshmen) 264	32	15	(Sophomores) 247

The nature of the losses and gains of the several classes is shown by the following table: —

Losses.	Class of 1884.	Class of 1885.	Class of 1886.	Total for three Classes.
Left College without completing the year	4	13	11	28
Left College after completing the year	4	6	15	25
Removed to a lower class	...	1	3	4
Advanced to a higher class	4	5	3	12
Total loss	12	25	32	69
Gains.				
From higher classes	...	...	3	
From lower classes	5	3	...	
Newly admitted	7	9	12	
Total gain	12	12	15	39
Net loss	...	13	17	30

Of the twenty-eight persons newly admitted to these three classes, ten were here as Special Students last year. Of these ten, two who came to us a year ago from other colleges have now gained admission to the Senior class; two who were formerly members of other classes in this college have been admitted, one to the Senior, the other to the Junior class; and six, who had never been members of any college class, have satisfied the requirements of the Faculty for admission, one to the Junior and five to the Sophomore class. Of the eighteen newly admitted who were not here last year, six had been in college before and have returned after an interval of absence; three entered the Sophomore class by passing the usual examinations; and nine graduates of other colleges were admitted without examination, or with only partial examination, one to the Sophomore, four to the Junior, and four to the Senior class.

Of the twenty-five students in the three classes who completed the work of the year, but have not returned to college, one was drowned during the summer vacation; the rest withdrew voluntarily to go into business, or to begin professional study, or for other reasons of a personal nature. Twenty students withdrew, for personal reasons, without completing the year's work. Two of these have returned and entered a lower class, and one has returned as a Special Student. Five students were required to leave before the end of the year for persistent neglect of their college duties, but three of them have been permitted to return this year and join a lower class. Three withdrew voluntarily at the end of the year on being informed that their deficiencies of scholarship were such that they could not go on with their classes. The following table gives a comparative view of the losses suffered by all of the classes, in each of the last eight years, owing to deficiencies of scholarship: —

	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.
Removed to lower classes . .	28	17	25	14	22	18	14	7
Withdrawn during the year .	8	16	4	11	4	7	3	5
Total	36	33	29	25	26	25	17	12
Whole number of undergraduates	776	823	818	819	813	829	823	885

The numbers of Special Students from October, 1882, to October, 1883, were as follows: —

Registered October, 1882		46
Registered later in the year		2
		48
Withdrew during the year		6
Completed the year		42
Left college at the end of the year	20	30
Admitted to a college class	10	
Returned as Special Students, October, 1883		12
Admitted, October, 1883		54
Present number		66

As the regulations described in my last Report, by which the Faculty gave Special Students a well-defined position in the College, and subjected them to more careful supervision, went into effect at the beginning of the year 1882–83, it may be well to present with some fulness the results of the system during the first year of its operation; and as the number of students was small, this can be done within sufficiently brief compass. The following tables exhibit the amount and quality of the work done by each of the forty-two Special Students who completed the year. Forty of these passed all the examinations in at least one study; two omitted either the mid-year or the final examinations in all of their studies.

The numbers in the first column stand for individual students arranged according to the amount of work they accomplished. The first table exhibits the record of those whose work consisted wholly or chiefly of elective courses. They were thirty-three in number, and sixteen of them succeeded in passing satisfactorily in all their studies. Of the remaining seventeen, two failed to take all of the required examinations in any of their studies, and fifteen passed in only a part of their work, having either omitted to take some of the examinations, or having taken the examinations and failed, in the rest. The deficiencies due to each of these causes are shown in the tables. The figures indicating the number of courses do not usually show the number of *studies*, but express the amount of the work done as it would be estimated for an undergraduate, the unit being one full elective course. Prescribed studies are estimated on the same basis, a study having three exercises a week being regarded as a full course, and other studies estimated in proportion. For the purpose of comparison it may be stated that a full year's work for a Senior is equivalent to 4.2 courses; for a Junior, to 4.5 courses; for a Sophomore, to 5 courses; for a Freshman, to 5.3 courses.

I. Special Students who passed in all their work.			II. Special Students who did not pass in all their work.					
Students.	Number of courses.	Average per cent.	Students.	Number of courses taken.	Number of courses in which the work was not completed.	Number of courses in which the student failed.	Number of courses in which the student passed.	Average per cent. in courses passed.
1	6.7	85	18	6.3	....	.8	6	49
2	6.3	80	19	5.5	....	1	4.5	47
3	5.5	71	20	4.6	.6	....	4	70
4	5	83	21	4.3	....	1	3.3	47
5	5	55	22	4	1	....	3	77
6	4.5	70	23	5	....	2	3	55
7	4	94	24	4	....	1	3	46
8	4	66	25	4.9	....	2.3	2.6	50
9	4	52	26	4.5	2	....	2.5	77
10	3.5	64	27	3	1	....	2	71
11	3.5	48	28	5.6	1	2.6	2	56
12	3	52	29	3	....	1	2	47
13	3	52	30	2	1	....	1	95
14	2.9	65	31	2	1	....	1	86
15	2	90						
16	2	73	32	3.2	3.2	....	....	....
17	2	61	33	2	2	....	....	....

The next table presents the record of nine Special Students, whose work consisted exclusively of prescribed studies: —

Students.	Number of courses taken.	Number of courses in which the work was not completed.	Number of courses in which the student failed.	Number of courses in which the student passed.	Average per cent in the courses passed.
1	5.3	...	...	5.3	68
2	6.3	1	...	5.3	50
3	5.3	...	1.6	3.7	65
4	5.3	...	2.2	3.1	50
5	5.3	...	2.3	3	56
6	3	...	.3	2.7	50
7	2.6	...	.2	2.4	78
8	5.3	1.5	2.6	1.2	61
9	3.9	2.9	.7	.3	40

A Special Student may obtain a certificate of proficiency in any study in which his mark for the year is not less than seventy-five per cent. This standard was attained last year, —

In studies amounting	to	less than one full course,	by	4	students.
" " "	"	1, but less than 2 courses,	by	10	"
" " "	"	2, " " " 3 "	"	4	"
" " "	"	4, " " " 5 "	"	3	"
" " "	"	6 courses,	"	1	"

The Faculty further offer a general certificate, with mention on the Commencement programme, to any Special Student who shall have passed in twelve elective courses with an average mark of not less than seventy-five per cent. The student would ordinarily accomplish this by taking four courses a year for three years. The number of Special Students who last year passed in four or more elective courses was twelve, of whom only four attained an average of seventy-five per cent in the courses they completed.

In the examinations for admission the Faculty made a slight change in the requirements in Physics, by displacing Arnott's text-book, and substituting for it Avery's Elements of Natural Philosophy under Prescribed Physics, and under Elective Physics, Balfour Stewart's Elementary Lessons, which requires some knowledge of Trigonometry. The object of this change was not merely to secure a better training in Physics through the use of better text-books, but also to strengthen the elective group in Physical Science, which has proved to be considerably easier for the candidate to prepare than any of the other three groups. The difference has been by no means eliminated by this change, but it is thought that the state of the instruction in Physics in the schools will not justify any greater increase at present.

The Faculty also adopted two measures calculated to lighten the burden of the examination, — first, by permitting a candidate who takes the whole examination in the same year to be examined on a part of the requirements in June, and to postpone the rest (not exceeding six subjects) till September; and secondly, by providing examinations on the work of the Freshman year in June, as well as in September, and permitting a candidate to be examined on any of the subjects at either time. But under neither of these provisions can a candidate be examined again in September on a subject in which he failed in June.

The June examinations were held, as heretofore, at Cambridge, Exeter, N. H., New York, Philadelphia, Cincinnati, Chicago, St. Louis, and San Francisco, and, for the first time, at Andover, Mass., which was added to the list in compliance with the request — made with the approval of their Principal — of the pupils of the Phillips Academy at that place.

The number of candidates examined was three hundred and twenty-six. The results of the examinations in the several subjects, compared with those of previous years, are shown in the following table: —

1878. 133 Candidates. 1879. 179 Candidates. 1880. 236 Candidates. 1881. 253 Candidates. 1882. 315 Candidates. 1883. 326 Candidates.	PRESCRIBED SUBJECTS.										
	Caesar and Virgil.	Latin at Sight and Composition.	Xenophon or Reader.	Greek Sentences.	Ancient History and Geography.	Arithmetic.	Algebra.	Plane Geometry.	Physics.	English Composition.	French or German.
Percentage failing in each study.											
1878	14	7.5	29	18	20	13	31.5	43	14	19	36
1879	8	11	20	23	18	14.5	28.5	37	19	28.5	21
1880	14	6	17	17	15	14	29	36	11	17	13
1881	8	6	12	18	15	14	25	27	7	10	18
1882	7	11	7	16	11	12	27	20	14	15	15
1883	10	4	11	17	9	7	32	16	14	14	25

	ELECTIVE SUBJECTS.										
	Cicero and Virgil.		Latin at Sight and Composition.	Herodotus.	Greek Comp.	Iliad.	Trigonometry.	Solid Geometry.	Elective Physics.	Chem. or Botany.
Percentage failing in each study.										
1878	7		15	17.5	36	21	29	65	38	57
1879	16		28	22	33	13	32.5	60	48	24
1880	14		22	12	33	14	39	48	18	9
1881	15		18	12	19	12	30	41	16	27
	Cicero.	Virgil and Ovid.	Comp.							
1882	18	11	29	10	19	9	45	27	17	13
1883	12	6	17	8	20	7	45	12	28	18

The next table presents the general results of the examinations in each of the last four years. The present requirements have been in exclusive use for only three years; but in 1880 their use was so general, — only forty-two candidates were examined on the old method, — that the statistics for that year may properly be included in the comparison.

	1880.	1881.	1882.	1883.
Candidates examined	236	253	315	326
" admitted	216	231	286	298
" " clear . .	82	99	116	121
" rejected	20	22	29	28
Per cent "	8.5	8.7	9.2	8.6

Of the four groups of elective subjects, each candidate is required to present two, but any candidate may, if he wish, be examined on three, or on all. That from nine to twelve per cent of the candidates have each year availed themselves of this liberty will appear from the following table, which shows the various combinations of elective groups offered in the last four years: —

Number of Candidates who offered	1880.	1881.	1882.	1883.
Latin, Greek, Mathematics, and Physical Science	2	4	6	7
Latin, Greek, and Mathematics	15	14	17	8
Latin, Greek, and Physical Science	7	5	11	12
Latin, Mathematics, and Physical Science . .	2	1	3	4
Greek, Mathematics, and Physical Science . .	..	1	..	..
Latin and Greek	159	177	204	216
Latin and Mathematics	17	13	12	15
Latin and Physical Science	20	25	41	41
Greek and Mathematics	..	2	5	4
Greek and Physical Science	4	..	3	7
Mathematics and Physical Science	10	11	13	12
Total number of candidates	236	253	315	326

The next table shows, for the same period, the number of candidates who offered each of the four elective groups:

	1880.		1881.		1882.		1883.	
Whole number of candidates	236		253		315		326	
Number offering		Per ct.		Per ct.		Per ct.		Per ct.
Latin	222	94	239	94	294	93	303	93
Greek	187	79	203	80	246	78	254	78
Mathematics .	46	19	46	18	56	18	50	15
Physical Science	45	19	47	18	77	24	83	25

It will be seen that the proportion of candidates offering each of the four groups has remained about the same in the last two years. The percentages for Latin and Greek are identical: the falling off in Mathematics is fully accounted for by the fact that the small number of candidates offering Mathematics in addition to Latin and Greek has been abruptly reduced by more than half, and the slight gain in Physical Science is due to a sudden increase in the still smaller number offering the rare combination of Greek and Physical Science. Both of these circumstances must be regarded as exceptional.

The Latin and Greek elective groups, together with the prescribed subjects, represent, in the present system, the requirements that were in force before the Faculty began the experiment of allowing a limited option in the examinations for admission. The amount of classical preparation required has indeed been somewhat reduced, and the present examinations demand, and have brought about, better methods of instruction in the classics than were formerly in use; but the end sought is substantially the same. The Mathematical and Physical groups, on the other hand, are pure additions to the old requirements, and are made up of studies which were formerly pursued by the student after his admission. In establishing these groups, the Faculty gave the candidate the liberty of reducing by about a year his study of Latin, or of Greek, or of both, and of substituting additional study in Mathematics or Physical Science. The following table has been prepared to show to what extent and in what ways the candidates who have entered on the present method in the past four years have made use of this liberty: —

	1880.	1881.	1882.	1883.
Whole number of candidates	236	253	315	326
Proportion of this number offering Latin and Greek (with or without other groups) . . . . Per ct.	77.5	79.1	75.5̇	74.5
Number of candidates offering *all* the groups . . .	2	4	6	7
Number of candidates offering *three* groups	24	21	31	24
Proportion of these offering Latin and Greek. Per ct.	91.7	90.4	90.8	83.3̇
„ offering Latin without Greek . . „	8.3	4.8	9.7	16.6̇
„ „ Greek without Latin . . „	. . .	4.8	. . .	. . .
Number of candidates offering *two* groups	210	228	278	295
Proportion of these offering Latin and Greek. Per ct.	75.7	77.6	78.4	73.2
„ offering Latin without Greek. . „	17.6	16.6	19.1	19
„ „ Greek without Latin . . „	1.9	.9	2.9	3.7
„ „ neither Latin nor Greek „	4.8	4.8	4.7	4.1

The variations here shown are not greater than might reasonably be expected to occur from year to year, and it would not be safe to infer from them any tendency in the choices of candidates. It appears that in these four years about three-quarters of the candidates have presented the full classical requirements; from seventeen to twenty-three per cent have offered one of the two language groups without the other, while a very few — never rising as high as one twentieth of the whole number of candidates offering two groups — have come prepared in the minimum language requirements only.

Of the two hundred and ninety-eight candidates admitted to college, five by passing further examinations, or in virtue of work they had done as Special Students, gained admission to the Sophomore class, two hundred and thirty-seven entered the Freshman class, and two have registered as Special Students. The votes admitting two others were rescinded when it was found they had been guilty of fraud in the examinations. Of the remaining fifty-two, it appears on inquiry that twenty-two have gone to other colleges; that six of these, with eighteen others, intend to enter this college at some future time; and that eleven for various reasons do not intend to go to college at all. One has not been heard from. As a result, the present Freshman class, in spite of the larger number of candidates admitted, is somewhat smaller than that of last year. The composition of the present class is as follows: —

Admitted to College in 1883	237
Previously admitted	11
Removed from a higher class	5
Total	253

The present number of students of all kinds is nine hundred and seventy-one. The increase over last year in the number of undergraduates is twenty; in the whole number of students, forty.

The whole number of candidates who offered themselves for a preliminary examination this year was two hundred and eighty-four, of whom two hundred and forty-four obtained certificates, having passed in at least five subjects. The following table exhibits the general results of the preliminary examinations on the present requirements for four years: —

Number of candidates who passed in	1880.	1881.	1882.	1883.
Five subjects	30	38	40	27
Six "	24	30	28	30
Seven "	31	46	46	60
Eight "	33	65	58	66
Nine "	22	17	33	29
Ten "	10	19	24	24
Eleven "	..	5	4	8
Received certificates	150	220	233	244
Failed to pass in five subjects	64	46	54	40
Total number of candidates . .	214	266	287	284

The next table shows, for the same period, the proportion of candidates examined in each subject under the present method, and the proportion of failures in each: —

Preliminary Examinat'n. 1880, 214 Candidates. 1881, 266 " 1882, 287 " 1883, 284 "	Caesar and Virgil.	Latin at Sight.	Xenophon or Greek Reader.	Greek Sentences.	Ancient History and Geography.	Arithmetic.	Algebra.	Geometry.	Physics.	English.	French.	German.
Percentage of the whole number of candidates who were examined in each study.												
1880	92	88	78	76	84	97	87	46	61	58	64	5
1881	88	86	78	79	76	97	82	46	74	61	54	5
1882	93	98	77	88	88	97	88	41	75	64	51	5
1883	93	92	76	81	84	98	91	49	81	66	51	9
Percentage of failure among those examined in each study.												
1880	25	25	25	26	39	22	50	61	7	34	21	30
1881	15	19	28	24	22	21	35	41	17	19	17	14
1882	20	26	9	30	27	17	37	27	12	37	17	14
1883	6	14	15	24	15	15	53	19	13	28	28	8

The discipline of the College during the past year required the action of the Faculty in very few cases. Three Sophomores were suspended for various periods, one for taking into an examination room a paper containing notes on the subject of the examination, another for presenting a theme which was not his own, the third for intoxication; and a student belonging to another department of the University was required to vacate a room he occupied in a college building for harboring a disorderly party there. The general good order of the College was interrupted in one instance, when the excitement of a victory in a ball match led to a serious disturbance, and a large crowd of students celebrated the success of their champions not merely with the boisterous demonstrations of delight that are natural under the circumstances, but with a bonfire and the explosion of fireworks, which are not without danger to college property. Such occurrences, however, are rare; on all ordinary occasions the unruly element which may be presumed to exist in any body of a thousand young men, is kept in control by the powerful sentiment of the great majority, which has proved a far more effective instrument for the maintenance of good order and gentlemanly conduct than the system of minute regulations formerly in force. The Faculty has recognized the value of this sentiment, which is not likely to err so far as it is rightly informed, by appointing committees to confer with students on subjects of current interest, to ascertain their wishes and feelings, to aid them with counsel or suggestion, and to advise the Faculty, in case any action of that body appears to be called for. These conferences have not been fruitless. The committee on athletic sports has already removed some serious abuses, and without infringing on the reasonable liberty of the student, will no doubt effect still further improvements in this important feature of college life. A committee appointed to inquire into the subject of initiations into college societies has, it is hoped, done something to mitigate the barbarity of some of the practices which tradition has still maintained in connection with these ceremonies. It was at the suggestion of the committee on initiations that the Faculty, near the close of the year, decided to appoint, for the purpose of providing a regular mode of communication with the students, a standing committee, who shall from time to time invite students to join them in conference on such subjects as it may be useful to discuss in this manner. The committee, of which the President of the University is, by the terms of the vote, chairman, is to try this interesting experiment during the present academic year.

Full information concerning the instruction given in the College in the year 1882–83 will be found in the tables on pages 58–71, which contain a detailed statement of the work done in each course, the names of the instructors, the number of hours a week of instruction, and the numbers of students of various classes and departments,* as well as the total number of students, in regular attendance.

In addition to the regular prescribed and elective studies counting towards the degree, instruction in certain subjects was given to voluntary classes. In Elocution instruction was given by Mr. H. D. Jones to forty-two Seniors, thirty-nine Juniors, thirty-nine Sophomores, and eighty-one Freshmen. The students were taught mainly in classes, but separate instruction was given to individ-

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* To designate the various kinds of students in the several courses, the following abbreviations are used: Se. for Senior, Ju. for Junior, So. for Sophomore, Fr. for Freshman, Sp. for Special Student, Gr. for Graduate Student, Law for Law Student, Di. for Divinity Student, Sc. for Scientific Student, and Bu. for Bussey Student.

PRESCRIBED STUDIES.

Instructors.	Courses of Instruction.	Hours per week.	Students.	Total number of Students.
	FRESHMAN STUDIES.			
	Greek.			
Mr. Hawes	1. [*Minimum Course.*] — Herodotus (Selections). — Homer (Iliad, Books IV., and VI.-IX.). — Grammar and Composition. — Selections from Grote's History of Greece	3	2 Se., 1 Ju., 1 So., 47 Fr., 3 Sp.	54
Messrs. Croswell, Parker, and Hawes	2. [*Maximum Course.*] — Lysias (Five Orations). — Plato (Apology). — Euripides (Alcestis). — Homer (Odyssey, Four Books)	3	2 So., 105 Fr., 1 Sp.	108
Profs. Allen and Dyer, and Mr. Croswell	3. [*Course for Advanced Sections.*] — Lysias (Five Orations). — Plato (Apology). — Homer's Odyssey (Six Books). — Euripides (Medea). — Translation at Sight. — Composition	3	3 So., 99 Fr.	102
	Latin.			
Mr. Preble	1. [*Minimum Course.*] — Cicero (Orations against Catiline). — Virgil (Selections from Aeneid VII.-XII.). — Ovid (Selections from the Elegiacs). — Composition. — Translation at sight	3	14 Fr., 4 Sp.	18
Messrs. Preble and Parker	2. [*Maximum Course.*] — Livy (Books XXI., XXII.). — Cicero (De Amicitia). — Horace (Odes, Books I.-III.). — Composition. — Translation at sight	3	129 Fr., 9 Sp.	138
Prof. Lane and Mr. Preble	3. [*Course for Advanced Sections.*] — Livy and Cicero, as in 2. — Horace (Odes and Epodes). — Plautus (Miles Gloriosus). — Translation at Sight and Composition	3	107 Fr.	107
	Greek and Latin.			
Prof. Dyer	Twenty Lectures on Classical Literature. — Jebb's Primer of Greek Literature. — Cruttwell's Roman Literature	1	1 Se., 3 Ju., 9 So., 257 Fr., 7 Sp.	284

	GERMAN.			
Prof. Cook and Mr. Lutz	1. Cook's Otto's or Sheldon's Grammar. — Joynes's Otto's Reader. — Translation of German Stories. — Writing German	3	1 Ju., 1 So., 111 Fr., 5 Sp., 1 Sc.	119
Prof. Cook and Mr. Lutz	2. [*Course for Advanced Sections.*] — Similar to the above, with a larger amount of translation	3	1 Ju., 129 Fr., 7 Sp., 6 Sc.	143
	FRENCH.			
Prof. Jacquinot	Brachet's Petite Grammaire Française (1e partie). — Bôcher's Reader. — G. Sand (La Famille de Germandre). — O. Feuillet (Le Roman d'un jeune homme pauvre)	3	1 Se., 3 Ju., 22 Fr., 9 Sp., 4 Sc.	39
	MATHEMATICS.			
Prof. Byerly and Dr. B. O. Peirce	1. [*Minimum Course.*] — Solid Geometry. — Plane Trigonometry. — Analytic Geometry.	2 till Xmas, then 3	2 Se., 1 Ju., 228 Fr., 7 Sp.	283
Prof. Peirce	2. [*Maximum Course.*] — Analytic Geometry (Lectures and Exercises)	2 till Xmas, then 3	1 Se., 3 So., 34 Fr., 4 Sp., 1 Sc.	43
Prof. C. J. White	3. Advanced Algebra	1 till May 1	254 Fr., 10 Sp.	264
	PHYSICS.			
Dr. Hall	1. [*Minimum Course.*] — Deschanel's Physics (Selections from Vols. I., II., and IV. as far as the Undulatory Theory of Light	2	1 Se., 5 Ju., 4 So., 193 Fr., 6 Sp., 4 Sc.	213
Dr. Hall	2. [*Maximum Course.*] — Deschanel's Physics (as above). — Maxwell's Heat (Selections)	2	1 Se., 55 Fr., 2 Sp.	58
	CHEMISTRY.			
Prof. Cooke	Nineteen Lectures	1	246 Fr.	246
	SOPHOMORE STUDIES.			
Prof. A. S. Hill, Messrs. Drennan and Wendell	1. Rhetoric. — Hill's Principles of Rhetoric. — Burke's Speech on Conciliation. — Twenty lectures on English and American authors	2	4 Ju., 181 So., 2 Fr., 7 Sp., 1 Sc.	195
Messrs. Drennan and Wendell	2. Six Themes, corrected and rewritten		7 Ju., 198 So., 1 Fr., 7 Sp., 1 Sc.	214

PRESCRIBED STUDIES. — CONTINUED.

	JUNIOR STUDIES.			
Messrs. Drennan and Wendell	1. Six Themes, corrected and rewritten		8 Se., 196 Ju., 4 So., 2 Sp.	205
Dr. Snow	2. (*a*) Four Forensics		5 Se., 174 Ju., 7 So., 1 Sp.	187
	(*b*) Theses substituted for Forensics		28 Ju.	28
	SENIOR STUDIES.			
Dr. Snow	(*a*) Four Forensics		178 Se., 5 Ju.	183
	(*b*) Written work substituted for Forensics		24 Se.	24

ELECTIVE STUDIES.

Instructors.	Courses of Instruction.	Hours per week.	Students.	Total number of Students.
	SEMITIC LANGUAGES.			
Prof. Lyon	1. Hebrew. — Davidson's Grammar and Harper's Vocabularies. — Hebrew Bible (Selections from Genesis, Judges, and the Psalms)	3	2 Ju., 4 Di.	6
Prof. Toy	2. Hebrew (Advanced Course)	2	8 Di.	8
Prof. Toy	3. Aramaic, Classical and Jewish	1	Omitted in 1882–83.	
Prof. Lyon	4. Assyrian. — Grammar (Lectures). — Delitzsch's Lesestücke	2	1 Di.	1
Prof. Toy	5. Arabic. — Wright's Grammar and Reader. — Thousand and One Nights (Selections)	2	1 Ju., 1 Di.	2
Prof. Toy	6. Lectures on the Quotations from the Old Testament in the New Testament.	1	3 Di.	3
Prof. Lyon	7. Lectures on Assyrian Antiquities	1 till March 1	4 Di.	4
Prof. Toy	8. Criticism of the Pentateuch. — Schultz's Alttestamentliche Theologie. — Lectures on the Criticism of Genesis and Deuteronomy	1	1 Gr., 8 Di.	9

	INDO-IRANIAN LANGUAGES.			
Prof. Lanman	1. Sanskrit. — Whitney's Grammar. — Lanman's Reader	3	1 Gr., 2 Ju., 1 Sp.	4
Prof. Lanman	2. Sanskrit (Advanced Course). — Hymns of the Rigveda. — Selections from the Brahmanas and the Law of Manu. — Açvalayana's Sutras (Private Antiquities of India)	3	1 Se.	1
Prof. Lanman	3. Sanskrit. — Kalidasa's Malavika and Agnimitra. — Açvalayana's Arlıyasutra. — The Çata-patha-brahmana	2	2 Gr.	2
Prof. Lanman	4. Zend.	2	Omitted in 1882–83.	
	GREEK.			
Prof. Dyer	1. Thucydides (Books VI. and VII.). — Sophocles (Ajax). — Aristophanes (Birds). — Euripides (Bacchae). — Aeschylus (Prometheus)	3 or 2	1 Gr., 30 So., 1 Fr., 1 Sp. 7 So.	40
Prof. J. W. White	2. Homer	3	Omitted in 1882–83.	
Mr. Croswell	3. Herodotus (Four books, with translation at sight from other books)	3	2 Se., 9 Ju., 49 So., 2 Fr., 2 Sp.	64
Mr. Croswell	4. Composition (First Course). — Sidgwick's Greek Prose Composition	1	2 Ju., 31 So.	33
Prof. Dyer	5. Composition (Second Course). — Sidgwick, Part IV. (Rhetorical exercises). — Sargent and Dallin's Materials and Models	1	1 Gr., 3 Ju.	4
Prof. J. W. White	6. Composition (Third Course). — Translations in the style of Plato	1	5 Se.	5
Prof. J. W. White	7. Thucydides (Selections from Books I., II.). — Demosthenes (De Corona). — Aeschines (Contra Ctesiphontem, selections). — Lectures on the Political History of Athens	3	3 Se., 7 Ju., 2 So.	12
Prof. Dyer	8. Plato (Republic, Books II., III., VI., VII., and parts of I., IV., V.). — Aristotle (Ethics, Books I., II., VI., X., and half of III.). — Theses.	3	1 Gr., 11 Se., 7 Ju.	19
Prof. J. W. White	9. Aeschylus (Persians). — Sophocles (Oedipus Rex and Antigone). — Aristophanes (Frogs). — Extracts from the Greek Lyric Poets. — Lectures and Theses	3	3 Gr., 14 Se., 10 Ju., 1 So., 1 Sp.	29
Prof. Sophocles	10. Arrian. — Polybius	2	Omitted in 1882–83.	
Prof. J. W. White	11. The Life of the Ancient Athenians. Forty-five Lectures, illustrated by the stereopticon	3 a fortnight.	5 Gr., 4 Se., 6 Ju., 2 So., 3 Sp.	20
Prof. Allen	12. Introduction to the critical study of Homer. — Lectures on the History of Homeric Studies and of the Homeric text, on Homeric verse and versification, and on the Homeric language. — Discussion of Iliad, Book I. (60 vss.). — Investigation of special questions, under the direction of the Instructor	2	5 Gr., 1 Sp.	6

ELECTIVE STUDIES. — CONTINUED.

Prof. Goodwin	13. The Political and Legal Antiquities of Athens	2	Omitted in 1882–83.	
Prof. Goodwin	14. Plato (Theaetetus). — Aristotle (Politics; Metaphysics). — Zeller's History of Greek Philosophy	2	Omitted in 1882–83.	
Prof. Sophocles	15. Pindar	2	Omitted in 1882–83.	

LATIN.

Prof. Smith	1. Terence (Phormio, Andria, and two acts of Hautontimorumenos). — Cicero (Selected Letters). — Tacitus (Agricola). — Horace (Selected Satires and Epistles). — Translation at sight	3 or 2	3 Ju., 50 So., 1 Fr., 3 Sp. 1 Ju., 11 So.	69
Prof. Greenough	2. Cicero. — Terence. — Horace. — Translation at sight	2	Omitted in 1882–83.	
Mr. Preble	3. Composition (First Course). — Nixon's Parallel Extracts. — Prepared Exercises	1	3 Ju., 84 So., 1 Sp.	88
Prof. Smith	4. Latin Poetical Literature. — Lectures on the Latin Poets, with illustrative readings from Thackeray's Anthology	3	3 Se., 3 Ju., 1 So., 1 Sp.	8
Mr. Preble	5. Latin Prose Literature. — Cicero (Philippics). — Sallust (Jugurtha). — Suetonius	3	3 Gr., 4 Se., 22 Ju., 7 So.	36
Prof. Lane	6. Juvenal (Selected Satires). — Pliny (Epistles). — The Dialogus de Oratoribus	3	2 Se., 20 Ju., 5 So.	27
Mr. Croswell	7. Composition (Second Course). — Wilkins's Latin Prose Composition	1	2 Se., 2 Ju.	4
Prof. Lane	8. Lucretius (Selections). — Plautus (Five Plays)	3	12 Se., 3 Ju., 1 Sp.	16
Mr. Preble	9. Composition (Third Course). — Potts's Hints and Exercises	1	4 Se., 1 Ju.	5
Prof. Greenough	10. The Private Life of the Romans, chiefly as illustrated by works of art	2	Omitted in 1882–83.	
Prof. Allen	11. Practice in speaking Latin, in connection with the study of Ovid's Metamorphoses (Books I., II.)	1	3 Gr., 1 Ju.	4
Prof. Allen	12. The Roman Drama. — Lectures on the history, structure, and versification of the Roman Drama, and on Scenic Antiquities; followed by lectures on the dramatists in chronological order, with reading of selected fragments from Ribbeck's Scaenicae Poesis Fragmenta and of the Menaechmi of Plautus	2	2 Gr., 1 Sp.	3
Prof. Lane	13. Latin Grammar. — Quintilian (Book I.). — Gellius (Selections). — Inscriptions (Allen's Early Latin Remnants)	2	Omitted in 1882–83.	

	Greek and Latin.			
Prof. Greenough	1. Greek and Latin Comparative Philology	3	Omitted in 1882–83.	
Profs. Allen and Smith	2. Practice in Text-criticism and Interpretation of Greek and Latin Authors. — Thucydides (Book I., 24 chapters). — Horace, Odes (Book II. i.–x.) — Besides this, each student investigated some philological question during the year, and presented to one of the instructors a report, which was discussed by the class. The exercises were conducted in Latin	3	5 Gr.	5
	English.			
Prof. Child	1. Chaucer (Selections from the Canterbury Tales). — Bacon (Essays). — Milton (Selected Poems)	3	8 Se., 5 Ju., 9 So., 5 Sp.	22
Prof. Child	2. Shakspere (Eight Plays)	3	11 Se., 14 Ju., 5 So., 1 Fr., 3 Sp.	34
Prof. Child	3. Anglo-Saxon. — Sweet's Reader. — Beówolf	2	1 Se., 3 Ju., 1 So., 1 Sp.	6
Prof. Child	4. Early English. — Mätzner's Altenglische Sprachproben. — Morris's Specimens of Early English	3	2 Se., 1 Ju.	3
Prof. A. S. Hill	5. Rhetoric and Themes (Advanced Course). — Sixteen Themes	3	1 Gr., 11 Se., 13 Ju.	25
	6. Oral Discussion		Omitted in 1882–83.	
Prof. A. S. Hill	7. English Literature of the Eighteenth and Nineteenth Centuries. — Stopford Brooke's Primer of English Literature. — Ward's English Poets (Vol. III.). — Authors of the Eighteenth Century	1	2 Se., 6 Ju., 9 So.	17
	German.			
Mr. Lutz	1. Eichendorff (Die Glücksritter). — Freytag (Die Journalisten; Bilder aus der neuen Zeit; part of Die Stillen im Lande; Aus dem Staate Friedrich's des Grossen). — Heyse (L'Arrabiata; Das Mädchen von Treppi; Die Blinden). — Translation from English into German	3	8 Se., 10 Ju., 69 So., 6 Fr., 4 Sp.	97
Prof. Bartlett	2. Translation at sight, and practice in writing German. — L. Stacke's Deutsche Geschichte (Vol. VI.). — Der Neue Plutarch (Vol. II., VI.)	3	3 Se., 43 So., 1 Sp.	47
Prof. Bartlett	3. Subjects in German History and Literature. — Stacke's Deutsche Geschichte (Vol. VI.). — The Lyrics and Balads of Goethe, Schiller, Lessing, Körner, Uhland, Chamisso, Bürger, and Rückert. — Lessing (Emilia Galotti and Minna von Barnhelm). — Practice in writing and speaking German	3	8 Se., 12 Ju., 1 So., 3 Sp.	24

ELECTIVE STUDIES. — CONTINUED.

Prof. Cook	4. Goethe (Selected Poems: Götz von Berlichingen). — Schiller (Fiesco; Don Carlos). — Zschokke (Der todte Gast, read at sight)	3	7 Se., 34 Ju., 4 So.	45
Prof. Bartlett	5. German Literature of the Eighteenth Century. — Extracts from the Literary Histories of Kurz, Hettner, and Koenig. — Goethe (Götz von Berlichingen; Iphigenie; Tasso; Faust). — Schiller (Fiesco; Wallenstein; Lyrics and Ballads). — Lessing (Emilia Galotti; Nathan der Weise). — Practice in writing and speaking German	3	12 Se., 4 Ju., 3 So., 1 Fr.	20
Prof. Cook	6. Goethe (Faust, Part I.; Iphigenie). — Freytag (Soll und Haben). — Goethe (Reineke Fuchs, read at sight)	3	23 Se., 1 So.	24
Mr. Sheldon	7. German Literature before Luther. — Hartmann von Aue (Der arme Heinrich). — Nibelungen Lied. — Walther von der Vogelweide. — Lectures (in German) on Old German Literature. — Theses (two by each student; one on a grammatical, the other on a literary topic)	3	1 Gr., 4 Se.	5
Mr. Sheldon	8. Introduction to Germanic Philology. — Sievers's Grundzüge der Phonetik. — Sweet's Handbook of Phonetics. — Ulfilas. — Braune's Althochdeutsches Lesebuch. — Theses	2	2 Se.	2
	FRENCH.			
Prof. Jacquinot	1. Brachet's Petite Grammaire Française (2^{e} partie). — Sandeau (Sacs et Parchemins). — About (Germaine). — Augier (Ceinture dorée). — Labiche (La Poudre aux yeux)	3	1 Se., 7 Ju., 33 So., 2 Fr., 4 Sp.	47
Prof. Bôcher	2. La Fontaine (Fables, all read, seven committed to memory). — George Sand (La Mare au diable; 494 lines committed to memory). — Racine (four plays). — Taine (La Fontaine et ses Fables). — Guerard's Grammaire Française. — Composition (oral and written synopses of the works read)	3	2 Se., 4 Ju., 24 So., 1 Fr.	31
Prof. Bôcher	3. Molière (all). — Corneille (three plays). — Brueys and Palaprat (Le Grondeur). — Regnard (Le Joueur). — Paul Albert (Littérature Française jusqu'au xvii siècle). — G. Sand (La Mare au diable; 600 lines committed to memory). — Theses (one by each student)	3	8 Gr., 4 Se., 10 Ju., 4 So., 1 Fr.	22
Prof. Jacquinot	4. Paul Albert (La Littérature Française au 19^{me} siècle). — Sainte Beuve (Portraits Contemporains, Vol. I.). — Chateaubriand. — Mme. de Staël. — G. Sand. — Balzac. — P. Mérimée. — V. Hugo. — A. de Musset. — E. About. — E. Augier. — A. Dumas fils. — V. Sardou. — Theses. — Lectures	3	4 Se., 3 Ju., 1 So., 1 Fr.	9

Prof. Bôcher	5. Translation and Reading at sight. — G. Sand (La Mare au diable; Les Maitres sonneurs). — Alfred de Musset (Histoire d'un Merle blanc). — Erckmann-Chatrian (Madame Thérèse). — Beaumarchais (Le Barbier de Séville; Le Mariage de Figaro). — Cherbuliez (Prosper Randoce)	2	1 Gr., 4 Se., 19 Ju., 27 So., 2 Fr., 2 Sp., 1 Law, 1 Sc.	57
	ITALIAN.			
Mr. Sheldon	1. Toscani's Grammar. — De Amicis (Racconti Militari). — Manzoni (I Promessi Sposi). — Translation of easy English into Italian	3	1 Se., 7 Ju., 3 So., 2 Fr., 1 Sp.	14
Mr. Sheldon	2. Gherardi del Testa (six plays). — Ariosto (Orlando Furioso). — Tasso (Gerusalemme Liberata). — Silvio Pellico (Francesca da Rimini). — G. Giacosa (one play). — Translation from English into Italian	3	3 Se., 1 Ju.	4
Prof. Nash	3. Boccaccio (Selections from the Decamerone). — Petrarca (Le Rima). — Dante (Lectures on the Divina Commedia, with readings from the Inferno). — Lectures on the history of Italian Literature, and on Grammar. — Practice in translation at sight, and in writing and speaking Italian.	3	4 Se.	4
Prof. Norton	4. Dante	2	Omitted in 1882–83.	
	SPANISH.			
Prof. Nash	1. Josse's Grammar. — Gil Blas. — El Eco de Madrid. — Prose Composition	3	11 Se., 9 Ju., 5 So., 1 Fr., 1 Sp., 1 Di.	28
Prof. Nash	2. De Moratin (La Comedia nueva; El viejo y la niña). — Martinez de la Rosa (Lo que puede un empleo). — Breton de los Horreros (Marcela). — Hartzenbusch (La coja y el encogido; Juan de las Viñas). — Critical study of one play. — Prose Composition. — Reading and Translation at sight	3	1 Gr., 4 Se., 3 Ju.	8
Prof. Nash	3. Calderon (El Mágico Prodigioso). — Lope de Vega (La Estrella de Sevilla; Si no vieran las mujeres). — Cervantes (Selections from Don Quijote). — Literary criticisms and biographies. — Prose Composition. Practice in reading at sight and in speaking Spanish	3	6 Se., 1 Ju.	7
	PHILOSOPHY.			
Prof. Palmer	1. Logic and Metaphysics. — Jevons's Logic. — Ferrier's Lectures on Greek Philosophy	3	8 Se., 35 Ju., 32 So., 1 Sp.	76
Dr. Royce	2. Logic and Psychology. — Jevons's Logic. — Fowler's Inductive Logic. — Taine on Intelligence. — Lectures on Mental Processes	3	2 Se., 17 Ju., 19 So., 1 Fr., 3 Sp., 1 Sc.	43

ELECTIVE STUDIES. — CONTINUED.

Prof. Palmer	3. Ethics. — Lectures on English Ethics before Mill. — Mill's Utilitarianism. — Kant's Theory of Ethics. — Theses	3	29 Se., 16 Ju., 1 Sp.	46
Dr. Royce	4. English Philosophy. — Locke's Essay on the Human Understanding. — Berkeley's Principles of Human Knowledge. — Hume's Essays on Inquiry, Miracles, and Providence. — Lectures. — Theses	3	4 Se., 12 Ju., 2 Sp.	18
Prof. Bowen	5. Earlier French Philosophy and German Philosophy from Kant to Hegel. — Bouillier's Philosophie Cartésienne. — Bowen's Modern Philosophy. — Meiklejohn's Kant's Critique of Pure Reason. — Lectures	3	8 Se., 15 Ju., 2 Di.	25
Prof. Bowen	6. German Philosophy of the Present Day. — Schopenhauer's Die Welt als Vorstellung und Wille. — Hartmann's Philosophie des Unbewussten	3	4 Se.	4
Prof. Palmer	7. Hegel's Rechtsphilosophie	2	2 Gr., 4 Se., 2 Di.	8
Dr. Royce	8. Advanced Psychology. — Lectures on the purpose, scope, and main problems of Psychology. — Ribot's Psychologie Allemande, with lectures. — Theses	2	2 Se.	2
Prof. F. G. Peabody	9. Philosophy of Religion	1	2 Se., 1 Ju., 10 Di.	13
Prof. F. G. Peabody	10. Ethics in its relation to Religion. — Spencer's Data of Ethics. — Maurice's Social Morality	1	4 Se., 8 Di.	12

POLITICAL ECONOMY.

Dr. Laughlin and Mr. Taussig	1. Mill's Principles of Political Economy. — Lectures	3	1 Gr., 22 Se., 113 Ju., 13 So., 3 Sp., 2 Law, 1 Sc.	155
Dr. Laughlin	2. Cairnes's Leading Principles of Political Economy. — History of Political Economy. — McKean's Condensation of Carey's Social Science. — Lectures	3	2 Gr., 24 Se., 8 Ju., 1 Sp.	35
Dr. Laughlin	3. Studies in Land Tenures of England, Ireland, and France. — Theses	1	1 Gr., 6 Se.	7

HISTORY.

Mr. Macvane	1. Mediaeval and Modern European History (introductory to courses 6, 7, 8, and 9)	2	8 Se., 15 Ju., 71 So., 2 Fr., 6 Sp.	102
Mr. Macvane	2. Constitutional Government in England and the United States (introductory to courses 11, 12, and 13)	2	2 Se., 10 Ju., 42 So., 6 Sp.	60

Prof. Gurney	3. History of the Roman Republic, with especial reference to the development of Political Institutions in Greece and Rome. — Mommsen's History of Rome. — Lectures	2	2 Se., 4 Ju., 13 So., 1 Fr., 2 Sp.	22
Prof. Gurney	4. Later Roman and Early Mediaeval History (from Augustus to Charlemagne) with especial reference to Institutions. — Merivale's History of the Romans under the Empire. — Gibbon's Decline and Fall of the Roman Empire. — Lectures	3	7 Se., 4 Ju., 6 So., 1 Fr.	18
Dr. Young	5. Legal Institutions of the Franks, the Anglo-Saxons, and the Normans	3	Omitted in 1882–83.	
Dr. Young	6. The General History of Europe from the beginning of the Ninth to the end of the Thirteenth Century	3	8 Se., 3 Ju., 2 So.	13
Prof. Gurney	7. Constitutional and Legal History of France to the end of the Fifteenth Century	2	Omitted in 1882–83.	
Dr. Young	8. Constitutional and Legal History of England to the Seventeenth Century	3	2 Gr., 13 Se., 14 Ju.	29
Prof. Emerton	9. History of the Protestant Reformation and the Roman Catholic Reaction. — Lectures	2	13 Di.	13
Mr. Macvane	10. European History during the Seventeenth Century and the first half of the Eighteenth	3	2 Gr., 36 Se., 42 Ju., 1 So., 3 Sp.	84
Mr. Macvane	11. European History from the middle of the Eighteenth Century	3	Omitted in 1882–83.	
Dr. Snow	12. Constitutional and Political History of the United States from 1789 to 1850. — Lectures	3	1 Gr., 85 Se., 62 Ju., 8 So., 6 Sp., 1 Sc.	163
Prof. Torrey	13. Forms of Government and Political Constitutions (particularly in Continental Europe) since 1789	2	2 Gr., 13 Se.	15
Prof. Torrey	14. History of Modern Treaties. — Elements of Public International Law	3	2 Gr., 18 Se.	20
Prof. Everett	15. Studies in the Comparative History of Religions	2	Omitted in 1882–83.	
Prof. Emerton	16. Practice in the Study and Use of Historical Sources. Subject for the year: Church and State in the Eleventh Century. Each student prepared five theses, embodying original investigations.	2	1 Gr., 4 Se.	5

Roman Law.

Dr. Young	1. Gneist's Institutionum et Regularum Juris Romani Syntagma. — Mommsen and Krueger's Corpus Juris Civilis (Vol. I.)	3	1 Gr., 10 Se., 11 Ju., 2 So.	24
Prof. Gurney	2. The Law of Inheritance (chiefly Testamentary) in the Institutes of Gaius and Justinian, and Selections from the Digest (Books xxviii.–xxx.)	1	3 Se., 4 Ju., 5 So., 1 Fr.	13

ELECTIVE STUDIES. — CONTINUED.

	THE FINE ARTS.			
Mr. Moore	1. Principles of Delineation, Color, and Chiaroscuro. — Ruskin's Elements of Drawing and Modern Painters. — Pyne's Perspective. — Lectures. — Practice in Drawing	3	9 Se., 10 Ju., 9 So., 1 Fr., 1 Sp., 3 Sc.	33
Mr. Moore	2. Principles of Design in Painting, Sculpture, and Architecture. — Lectures. — Practice in Drawing. — Outside reading required in Sir Joshua Reynolds's Discourses, Woltmann's History of Painting, Ruskin's Seven Lamps of Architecture and Stones of Venice	2	1 Se., 1 Ju., 1 Sp.	3
Prof. Norton	3. Ancient Art	3	Omitted in 1882–83.	
Prof. Norton	4. Art in Italy, from the conquest of Greece by the Romans to the year 1600. — Lectures	3	2 Gr., 41 Se., 12 Ju., 6 So., 8 Sp., 3 Di.	72
Prof. Norton	5. Greek Art. — Reber's History of Ancient Art. — Lectures	3	17 Se., 15 Ju., 1 So., 3 Sp., 1 Di.	37
Prof. Norton	6. Romanesque and Gothic Art, from the year 1000 to 1350	1	Omitted in 1882–83.	
	MUSIC.			
Prof. Paine	1. Richter's Harmony. — The Instrumental Music of Haydn, Mozart, Beethoven, and their successors	3	5 Se., 7 Ju., 4 So., 1 Fr., 1 Sp.	18
Prof. Paine	2. Richter's Counterpoint	3	2 Se., 4 Ju., 1 Sp.	7
Prof. Paine	3. History of Music. — Lectures	3	9 Se., 5 Ju., 1 So.	15
Prof. Paine	4. Richter's Canon and Fugue	3	1 Ju.	1
Prof. Paine	5. Free Thematic Music. — Forms of Modern Instrumental Music	2	1 Gr.	1
	MATHEMATICS.			
Prof. C. J. White	1. Problems in Plane Trigonometry, Spherical Trigonometry, Navigation, and Nautical Astronomy. — Wheeler's Trigonometry. — American Nautical Almanac	2	4 Se., 3 Ju., 9 So.	16
Prof. Byerly	2. Differential and Integral Calculus (First Course). — Byerly's Differential Calculus. — Lectures	3	1 Gr., 1 Se., 1 Ju., 34 So. 1 Fr., 2 Sp.	40

Prof. Byerly	3. Modern Analytic Geometry and the Theory of Equations. — Lectures, with references to Salmon's Conic Sections and Todhunter's Theory of Equations	3	7 So.	7
Dr. B. O. Peirce	4. Differential and Integral Calculus (Second Course). — Lectures on the more difficult parts of the Differential Calculus and on the Integral Calculus, Differential Equations, and the Equilibrium of Fluids. Text-books: Byerly's Differential and Integral Calculus, Besant's Hydro-mechanics, and Walton's Problems in Hydrostatics	3	7 Ju., 1 So., 2 Sp.	10
Prof. Peirce	5. Quaternions (First Course). — Linear and Vector Function and Quadrics. — Lectures and Problems, with the use of Hardy's, Tait's, and Hamilton's treatises	3	1 Se., 3 Ju.	4
Prof. Eustis	6. Descriptive Geometry, Perspective, and Shades and Shadows. — Church's Descriptive Geometry, with additional problems. — Lectures	3	1 Se., 1 So., 1 Sc.	3
Prof. Peirce	7. Analytic Mechanics (Second Course). — Lectures and Problems, following Routh's Rigid Dynamics, but treating the theory by Quaternions	3	1 Gr., 3 Se.	4
Prof. Byerly and Dr. B. O. Peirce	8. Arbitrary Functions and the Theory of the Potential. — Lectures	3	1 Gr., 3 Se., 1 Sc.	5
Prof. Peirce	9. Laplace's Coefficients and Spherical Harmonics, studied from Pierce's Analytic Mechanics and Maxwell's Electricity and Magnetism	1	1 Gr., 3 Se.	4
	PHYSICS.			
Prof. Lovering	1. Astronomy, Optics, and Acoustics. — Herschel's Outlines of Astronomy. — Deschanel's Optics and Acoustics. — Lectures	3	1 Se., 2 Ju., 8 So., 2 Sp., 1 Sc.	14
Prof. Trowbridge	2. Practical Exercises in the Laboratory, including the use of instruments of precision. — Thresh's and Kaulrausch's Physical Measurements	3	5 Se., 3 Ju., 16 So., 2 Sp.	26
Prof. Trowbridge	3. The Correlation and Conservation of Forces. — Maxwell's Heat. — Tait's Recent Advances in Physical Science	2	2 Se., 2 Ju., 1 So., 1 Sp.	6
Prof. Lovering	4. Deschanel's Electricity and Magnetism. — Lloyd's Undulatory Theory of Light. — Lectures	3	1 Gr., 1 Se., 2 Ju., 4 So., 2 Sp.	10
Prof. Gibbs	5. The Spectroscope and its Applications. — Thermodynamics and Thermics, including the Applications of Heat. — Lectures	3	1 Gr., 2 Se.	3
Prof. Trowbridge	6. Experimental Physics. — Maxwell's Electricity and Magnetism. — Rayleigh's Theory of Sound. — Laboratory Work	3	1 Gr., 1 Se., 1 Ju., 2 Sp.	5
Prof. Trowbridge	7. Mathematical Physics. — Maxwell's Electricity and Magnetism. — Laboratory Work	3	1 Gr., 1 Se., 1 Ju.	3

ELECTIVE STUDIES.—CONTINUED.

	CHEMISTRY.			
Prof. Jackson and Dr. Mabery	1. Descriptive Chemistry.—Lectures, Recitations, and Laboratory Work	3	3 Se., 10 Ju., 40 So., 3 Sp., 3 Sc.	59
Prof. Cooke and Mr. Huntington	2. Crystallography, Crystal Optics, Mineralogy, and Lithology (lectures).—Determinative Mineralogy (in the Mineralogical Cabinet)	3	4 Se., 17 Ju., 4 So., 1 Sc.	26
Prof. H. B. Hill and Dr. Mabery	3. Qualitative Analysis.—Lectures and Laboratory Work	3	7 Se., 28 Ju., 1 Sp., 2 Sc.	38
Prof. Cooke and Dr. Kinnicutt	4. Quantitative Analysis.—Laboratory Work	3	7 Se., 8 Ju., 1 Sp., 2 Sc.	18
Prof. H. B. Hill	5. The Carbon Compounds.—Lectures and Laboratory Work	3	6 Se., 2 Ju., 1 Sp.	9
Prof. Cooke	6. Advanced Inorganic Chemistry.—Laboratory Work on Vapor and Gas Density, and on Thermo-Chemistry	3	4 Se.	4
Prof. Cooke	7. Crystallography and the Physics of Crystals		Omitted in 1882–83.	
Prof. Storer	8. Agricultural Chemistry	3	5 Bu.	5
Prof. H. B. Hill	9. Advanced Organic Chemistry.—Laboratory Work and Thesis		1 Se.	1
	NATURAL HISTORY.			
Mr. Davis	1. Physical Geography and Meteorology.—Reclus's Earth and Ocean	3	25 Se., 17 Ju., 20 So., 2 Fr., 4 Sp., 2 Sc.	70
Dr. Mark	2. Zoölogy.—Huxley's Elementary Lessons in Physiology.—Lectures.—Thesis	3	39 Se., 34 Ju., 25 So., 2 Fr., 2 Sp., 2 Sc.	104
Prof. Goodale and Mr. Jones	3. Botany.—Gray's Text-Book.—Lectures and Laboratory Work	3	10 Se., 9 Ju., 5 So., 1 Fr., 1 Sp., 1 Sc.	27
Prof. Shaler and Mr. Davis	4. Geology.—Dana's Manual.—Lectures, Discussions, and Field Work	3	1 Gr., 75 Se., 54 Ju., 42 So., 2 Fr., 8 Sp., 1 Di., 2 Sc.	185
Profs. Farlow and Faxon	5. Biology.—Lectures and Laboratory Work	3	2 Se., 17 Ju., 4 So., 1 Sp.	24
Prof. Faxon	6. Zoölogy (Advanced Course).—Anatomy and Development of the Vertebrata and Anthropoda.—Laboratory Work	3	13 Se., 4 Ju., 1 Sc.	18
Profs. Goodale and Farlow	7. Botany (Advanced Course).—Lectures and Laboratory Work	4	7 Se., 2 Ju., 3 Sc.	12

Prof. Shaler and Mr. Davis	8. Geology (Advanced Course). — Lyell's Principles of Geology. — Lectures, Discussions, and Field Work	3	18 Se., 4 Ju., 1 Sp., 2 Sc.	25
Dr. Mark	9. Embryology.—Balfour's Comparative Embryology.—Laboratory Work and Theses	1	8 Sc.	8
Prof. Hagen	10. General Entomology	2	Omitted in 1882–83.	
Prof. Goodale	11. Morphology and Histology of Phanerogams (Advanced Course). Experimental Vegetable Physiology	3	Omitted in 1882–83.	
Prof. Farlow	12. Structure and Development of Cryptogams. — Laboratory Work	8	1 Se., 2 Sc.	3
Prof. Lyman	13. Anatomy and Histology of Domestic Animals. — Lectures and Laboratory Work		3 Fr., 1 Sp., 5 Bu.	9
Prof. Shaler	14. Palaeontology. — Lectures and Laboratory Work	3	2 Gr., 8 Se., 2 Sc.	7
Prof. Shaler	15. Historical Geology (with laboratory work)	3	Omitted in 1882–83.	
Prof. Shaler	16. Geological Field and Laboratory Work, for training in the principles of Geological Surveying and in the preparation of reports. — Ten excursions with the Instructor; fifteen days of private practice in the field		1 Ju.	1
Prof. Shaler	17. History of Geological Opinions	1	Omitted in 1882–83.	
Prof. Whitney	18. Economical Geology. — Lectures.	2	1 Gr., 4 Se., 1 Sc.	6
Prof. Whitney and Dr. Wadsworth	19. Geology (for advanced special students). — Field Work. — Laboratory Work in Lithology (about six hours a day).		1 Gr., 1 Sc.	2

uals, when needed, so far as the time of the instructor permitted. The Seniors and Juniors were taught in four sections, each section receiving two hours of instruction a week; the Sophomores and Freshmen in two sections each, with one hour of instruction a week. In Physics a course of weekly lectures was given by Professor Lovering, and a similar course on Physiology and Hygiene by Professor Sargent. Further opportunities of instruction, used to a considerable extent by the students of the College, are offered by the University in the courses of public lectures given each year by distinguished specialists. In 1882–83 one hundred and twelve such lectures were given on subjects connected with Theology, Philosophy, Classical Philology, Archæology, History, Political Economy, English Literature, Physiology, and Lithology. The Evening Readings in Ancient and Modern Classics, given by instructors in the College, were forty-three in number. Selections were read from Assyrian Literature by Professor Lyon; Homer, by Professor Palmer; Sophocles, by Professor Dyer; Euripides, by Professor Dyer; Theocritus, by Professor Croswell; Plato by Professors Allen and Dyer; Plautus, by Mr. Hawes; Terence, by Mr. Preble; Catullus, by Professor Croswell; Virgil, by Mr. Parker; Chaucer, by Professor Child; German Authors, by Mr. Lutz.

The scheme of instruction for the year 1883–84, which chiefly engaged the attention of the Faculty during March and April, presents a large number of new courses and a better organization of the studies in some departments. The appointment of an assistant professor in Political Economy enabled the Faculty to double the amount of instruction in a subject which is now pursued with great zeal by large numbers of students. Of the seven courses now offered, the first two present the theoretical side of the subject. Course 1 is an introductory course, designed to meet the wants both of the general student, and of those who propose to extend their studies to the special topics which form the subjects of the advanced courses. It is devoted chiefly to the exposition and illustration of the general principles of Political Economy, but also includes a course of lectures on the elements of banking, with a critical review of the public finance of the United States, chiefly since the year 1861. Course 1 is the only course required as a preparation for any of the advanced courses; but for the benefit of students who wish to make more thorough and extended studies in Political Economy, a second theoretical course is provided, in which the subject is treated historically by a critical examination and comparison of the theories of leading writers. These are both full courses. In the first Professors Dunbar and Laughlin both give instruction; the second is conducted by Professor Dunbar. Of the remaining five courses, of which four are new, two are full courses, with three or two exercises a week, while three, having each one exercise a week, are rated as half-courses. The latter are devoted to the treatment of special topics: The Economic Effects of Land Tenures in England, Ireland, France, and Germany, by Professor Laughlin; Tariff Legislation in the United States, by Dr. Taussig; Comparison of the Financial Systems of France, England, Germany, and the United States, by Professor Dunbar. One full course, conducted by Professor Laughlin, is devoted to the investigation of practical economic questions of contemporary interest, such as Bimetallism, Reciprocity with Canada, National Bank Issues, American Competition, and similar topics that may arise from year to year. The preparation and discussion of theses by the students is an essential feature of this course. Finally, a full course, consisting of three lectures a week by Professor Dunbar, on the Economic History of Europe and America since the Seven Years' War, opens an attractive field to students of history, who may elect it without having taken any other course in Political Economy.

In the department of Semitic Languages, three courses which are of more especial interest to students of Theology have been removed from the college list. On the other hand, an advanced course in Assyrian, by Professor Lyon, and an advanced course in Arabic, by Professor Toy, have been established, so that in each of these languages, as well as in Hebrew, there is now provision for a course of study extending through two years. The course in Aramaic remains on the list, and a half-course on the Cuneiform Inscriptions and the Old Testament, by Professor Lyon, has been added.

In Greek two courses are provided for Sophomores, one being designed especially for candidates for second-year honors. This is the same arrangement that existed before 1882–83, except that each of the courses now has three exercises a week, instead of two. The first course is to be conducted by Professor Croswell, the second by Professors J. W. White and Dyer. The courses of Professor Sophocles, who, owing to failing health, has not been able to teach since the beginning of the past year, do not appear in the list. Professor J. W. White's course on the Life of the Ancient Athenians is omitted for the present year, but is to be given next year as a three-hour course. In Latin a new course, to be conducted by Mr. Preble, is designed especially for Sophomores who wish to acquire greater facility in reading. Professor Allen has substituted a course in the Critical Study of Ovid for his course on the Roman Drama; his course for practice in speaking Latin has been consolidated with the second course in Composition, which he will now conduct; and his course of lectures on the History and Methods of Classical Study, given in 1881–82, is announced again for this year.

In English, Professor Child's course in Anglo-Saxon has been enlarged to a three-hour course, but is to be given in alternate years with the course in Early English. In this department also was placed a course of study not heretofore admitted among those for which the degree is given, — Elocution. The course is open to those students only who have already pursued the study in a voluntary class for a year with marked success, and who are willing to give a considerable amount of time to it. For those who do not wish to give so much time, voluntary instruction is still provided. The work is to consist partly of a study of the principles of elocution, with training in the use of the voice, partly of the study of selections from English classics. The course is conducted by Mr. H. D. Jones, and is rated as a half-course.

In French, the courses heretofore given have embraced the literature of the seventeenth, eighteenth, and nineteenth centuries. To supplement these, two new courses have now been added, one treating of the literature of the fifteenth and sixteenth centuries, the other of French literature before the fifteenth century. The two courses are to 'be given in alternate years by Professor Bôcher. A third additional course has been established in French and Provençal Philology, to be given by Mr. Sheldon alternately with his course in Germanic Philology and Gothic. Each of the three new courses is to have one exercise a week, and to count as a half-course.

In Philosophy Professor James has substituted for his introductory course two half-courses, one on Psychology, the other on the

Philosophy of Evolution. These half-courses have each three exercises a week for a half-year, — a plan which has not been used heretofore in elective studies, but which has many advantages, and will probably be adopted by other instructors. In History a course of two exercises a week has been added, to be conducted by Professor Emerton, on the Conflict of Christianity with Paganism to the end of the Eighth Century; and in Roman Law a new half-course with one exercise a week, on the Law of Property, to be conducted by Professor Young, will alternate with Professor Gurney's half-course on the Law of Inheritance. Professor Norton's course on Romanesque and Gothic Art has been enlarged to a full course of three lectures a week. In Music the instruction in Harmony has been extended to occupy a full course of three hours, and the Instrumental Music of Haydn, Mozart, Beethoven, and their successors, which was last year treated in the former course, has been made the subject of a separate half-course. In Mathematics, a new one-hour half-course on the Elements of Mechanics, for students who have taken the first course in the Calculus, will be given by Dr. B. O. Peirce, and a second course in Quaternions, with two exercises a week, has been added by Professor Peirce. In Physics, Professor Trowbridge's course on the Conservation of Energy has been enlarged to a three-hour course, and a new half-course, with two exercises a week, on the Theory of Probability, with application to the Kinetic Theory of Gases, will be given by Dr. Hall. In Natural History, Professor Shaler's course in Geology is this year to have two, instead of three, exercises a week, and to count as a half-course.

The result of these changes is a list of one hundred and twenty-three courses offered for the present year. The number of hours of instruction cannot be given accurately. In a few courses, in which the nature of the subject suggested a somewhat elastic arrangement, the plan was adopted of appointing two exercises a week, with a third to be used at the pleasure of the instructor; and the number of hours in laboratory courses cannot be definitely stated. If we allow two hours and a half a week to a course of the former class, and three hours to a full laboratory course, — an estimate undoubtedly below the truth in both cases, — the total amount of instruction offered this year is three hundred and seventy-three hours a week. The number of hours per week of instruction in each department, compared with the number offered in previous years, is as follows: —

Number of exercises per week in elective courses offered in	1872–73	1873–74	1874–75	1875–76	1876–77	1877–78	1878–79	1879–80	1880–81	1881–82	1882–83	1883–84
Semitic Languages .	8	8	8	8	8	3	4	4	11	8	18	16
Sanskrit and Zend .	8	8	6	8	8	8	6	6	11	10	10	10
Greek	25	22	23	25	28	23	24	26	29	25	25½	26
Latin	15	15	15	19	20	18	22	18	22	26	23	27
Greek and Latin . .	..	..	..	3	3	2	2	3	3	8	8	6
English	8	8	5	8	11	14	15	16	16	16	15	15
German	8	8	11	14	17	19	24	25	22	28	23	21
French	14	14	18	12	15	15	15	15	14	18	14	16
Italian and Spanish	11	11	14	17	17	17	19	20	20	20	18	12
Philosophy . . .	12	12	9	9	12	12	18	23*	24	17	21	21
Ethics	8	8	3	3	3	3	8	3	3	8	3	3
Political Economy .	3	3	6	6	6	6	6	9	9	7	7	14½
History	17	17	20	20	28	23	25	25*	30	35	35	32½
Roman Law . . .	3	..	3	3	8	3	3	4	4	5	4	4
Music	5	8	11	14	11	12	13	18	15	14	14	11
Fine Arts	..	..	6	9	4	6	9	8	6	8	11	15
Mathematics . . .	24	20	24	20	28	24	28	30	26	26	24	25
Physics	12	12	14	15	15	17	22	21	19	19	20	23
Chemistry . . .	11	14	14	14	18	18	21	26	26	23	28	26
Natural History . .	20	23	23	28	25	24	30	42	46	36	45	49
Aggregate . .	197	196	228	240	255	262	308	337	356	347	351½	378

While it thus appears that the College offers a larger amount and greater variety of instruction than ever before, its resources have also been enriched in ways that are not shown by the mere enumeration of studies. This has been effected by improved methods of instruction which experience has suggested, and particularly by the greater facilities and encouragement given to advanced students to do independent work. Many of the regular courses are devoted largely or wholly to independent research and the preparation of theses on the part of the students; and outside of the regular courses, the opportunities offered to properly qualified students for the investigation and discussion of special topics, and for the pursuit of private study, with the aid and guidance of their instructors, are increasing yearly. A "Semitic Seminary," with two meetings a month, and a meeting for Mathematical discussion once a week, are the new announcements of this kind for the present year. The instructors in Mathematics and in Physics have further suggested certain courses of reading for graduate students in those departments, and announced their readiness to assist such students in this work, meeting them once a week for explanation and discussion.

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* Elective courses amounting to four hours a week in Philosophy and six hours in History were established in 1878 to take the place of the prescribed work in those subjects, which was abolished at that time. They formed no actual increase in the amount of instruction given.

The number of advanced students who seek these ample opportunities is perhaps as large as could be expected in the present state of education in this country, which demands no training beyond the college course for any but a college teacher, and not even for him in most cases; but it is far below what is desirable. The demand for better trained teachers is surely increasing; but there will always remain another serious obstacle to hinder the growth of a large graduate class, in the poverty of a great number of those who would gladly continue their studies after graduation. Many others who have been supported in comfort during their college course, feel that they ought not to draw on the resources of their parents or their friends any longer. The fellowships enjoyed by graduates are few in number, and in most cases are very properly used for study abroad. The only other form of aid heretofore open to graduate students has been a limited number of appointments to proctorships. With a view to make such provision as was in their power for aiding these students, the Faculty, having previously obtained the consent of the Corporation, last year awarded two Townsend and two Shattuck scholarships,—the former yielding an income of two hundred and fifty, the latter of one hundred and fifty dollars each,—to four candidates for the gree of Doctor of Philosophy. For the present year the Faculty has set aside for a similar purpose four Townsend scholarships, the most valuable of the few that are not by the terms of their foundations restricted to the use of undergraduates. The amount of this aid is necessarily small, but it is hoped that it may do something towards keeping here some of our best graduates, or attracting hither those of other colleges, and that more ample means may soon be provided for promoting this most important object. Nothing is now so much needed to strengthen the advanced courses which have been established, as a vigorous body of trained students, whose zeal and sympathy would stimulate at once their instructors and one another. The presence of such a body, moreover, could not fail to exert a beneficial influence on the College, by keeping before the eyes of the undergraduates not only an example of earnest work, but also a higher standard of scholarship than that which makes the first degree in arts the normal goal of an academic course.

CLEMENT L. SMITH, *Dean.*

NOVEMBER 27, 1883.

TO THE PRESIDENT OF THE UNIVERSITY:

SIR, — I have the honor to submit the following Report on the state of the Graduate Department for the year 1882–83: —

The practice of forming a separate list of studies designed for graduates has been abandoned, as I mentioned in my last report; and one list, comprising all the courses offered by the University, except those of a strictly professional character, is now prepared under the auspices of the College Faculty. The numbers of graduate students in attendance on these courses will be found stated in the Report of the Dean of that Faculty.

The Academic Council devoted much time, during the year 1882–83, to the consideration of the precise conditions, under which the degree of A. M. should be given for professional and technical studies, in pursuance of the new provision adopted by the Corporation and Overseers, at the instance of the Academic Council, in the preceding academic year. The result of their deliberations was the adoption of the following rules, which are numbered 6 and 7 among the *Standing Rules of the Academic Council:* —

"6. The Academic Council will approve studies pursued in the Professional and Scientific Schools as constituents of the one year's course of liberal study to be pursued by candidates for the degree of Master of Arts; but no study in a Professional or the Scientific School will be approved as part of such one year's course, unless the Council is satisfied that the candidate offering it has no intention or expectation of counting the same study towards the degree of Bachelor of Divinity, Bachelor of Laws, Doctor of Medicine, Bachelor of Science, or Civil Engineer.

"7. The Council will also recommend for the degree of Master of Arts students, otherwise properly qualified (see § 1 of the *Standing Rules of the Corporation and Overseers*), who are recommended by the appropriate Faculty for the degree of Bachelor of Divinity, Bachelor of Laws, Doctor of Medicine, Bachelor of Science, or Civil Engineer, after the longest course of study and residence provided for such degree, and upon examinations passed with high credit. Members of the Schools of Divinity, Law, Medicine, and Science, who are already Bachelors of Arts of Harvard University, and who wish to obtain the Master's degree simultaneously with their professional degree, should present their applications to the Faculty of the School with which they are connected, on or before the 1st of June in the year of their graduation."

These rules were put into operation at the close of the academic year.

Fourteen persons were admitted to candidacy for the degree of Master of Arts, and the whole number of candidates for that degree was fifteen; of whom three withdrew, and twelve received the degree. This enumeration does not include those who were admitted to the degree under Rule 7, above cited.

Ten persons were admitted, or readmitted, to candidacy for the degree of Doctor of Philosophy and Master of Arts, and the whole number of candidates for that degree was thirty-five; of whom one has died, six have withdrawn, two have transferred themselves to the list of candidates for the degree of Master of Arts, five received the doctor's degree at the end of the year, and twenty-one are still candidates for it.

Four persons were, and still remain, candidates for the degree of Doctor of Science, all of whom were admitted to candidacy in previous years.

The following are the names of persons admitted to degrees, on recommendation of the Academic Council, at Commencement, 1883: —

A.M.

Frederic Almy, A.B., 1880.
Joseph Austin Coolidge, A.B., 1882.
George Trumbull Hartshorn, A.B., 1882.
Henry Churchill King, A.B. (*Oberlin Coll.*), 1879,
A.M. and D.B. (*Oberlin Sem'y*), 1882.
Philip Coombs Knapp, A.B., 1878, M.D., 1882.
Robert Luce, A.B., 1882.
John Edward Maude, A.B., 1881.
Harry Leverett Nelson, A.B., 1881.
Edward Knights Stevens, A.B., 1882.
Frederic Mather Stone, A.B., 1882.
Duren James Henderson Ward, A.B. (*Hillsdale Coll.*), 1878,
A.M. (*Hillsdale Coll.*).
Horace Leslie Wheeler, A.B., 1881.

Of these, Messrs. King, Knapp, Maude, Nelson, and Ward received the degree under Rule 6.

Ph.D. and A.M.

FARLEY BREWER GODDARD, A.B., 1881.

Department, Philology. *Subject,* Greek and Latin. *Thesis,* "Studiorum Cyrenensium Capita Antiquaria Historica."

JOHN NORTON JOHNSON, A.M., 1882.

Department, Philology. *Subject,* Sanskrit. *Thesis,* "The Priests and Patrons of the Vedic Age."

WILLIAM TAGGARD PIPER, A.M., 1881.

Department, Philology. *Subject,* Greek and Latin. *Thesis,* "De Ratione Nominum Romanorum praesertim de Numero Praenominum Prisco."

ARTHUR WELLINGTON ROBERTS, A.B., 1881.

Department, Philology. *Subject,* Greek and Latin. *Thesis,* "De Homicidiis apud Graecos."

FRANK WILLIAM TAUSSIG, A.B., 1879.

Department, Political Science. *Subject,* Political Economy. *Thesis,* "Protection to Young Industries as applied in the United States."

Under Rule 7: —

A.M. with D.B.

James David Callahan, A.B. (*Univ. Mich.*), 1879.
Charles Elliott St. John, A.B., 1879.

A.M. with LL.B.

Frederick Hobbs Allen, A.B., 1880.
Frank Brewster, A.B., 1879.
Henry Eliot Guild, A.B., 1880.
Thaddeus Davis Kenneson, A.B., 1880.
Leonard Eckstein Opdycke, A.B., 1880.
Samuel Hanson Ordway, A.B. (*Brown Univ.*), 1880.
George Pellew, A.B., 1880.
William Schofield, A.B. 1879.

A.M. with M.D.

Franklin Asaph Dunbar, A.B., 1878.
Philip Coombs Knapp, A.B., 1878: *cum laude.*
Edward Winslow Warren, A.B., 1877.
Henry Austin Wood, A.B., 1878: *cum laude.*

The name of Dr. Knapp occurs twice in the above lists, because he was entitled to the degree under Rule 7, and also on the ground of an additional year of study devoted to a special course.

The Parker, Kirkland, and Walker Fellowships were held by the following persons, during the year 1882–83: —

John Parker Fellowships.

Frank Nelson Cole, A.B., 1882.
Joseph Silas Diller, S.B., 1879.
Edward Emerson Phillips, A.B., 1878, Ph.D., 1880.
George Lincoln Walton, A.B., 1875, M.D., 1880.

John Thornton Kirkland Fellowship.

Paul Shorey, A.B., 1878.

James Walker Fellowship.

Benjamin Rand, A.B., 1879, A.M., 1880.

Mr. Diller and Dr. Walton withdrew from their fellowships at the close of the academic year, each having completed the full term of three years. These gentlemen have distinguished themselves by their thorough and valuable work of study and research in the departments of Geology and of Nervous Diseases respectively. Mr. Diller, on his return from Europe, presented to the Committee in Natural History, as a candidate for the degree of S.D., a thesis, which that committee has approved, on "The Geology of the Troad." He defers his examination for the degree to a later year. Dr. Walton has published several highly important papers on the specialty to which he devotes himself.

Messrs. Cole, Phillips, Shorey, and Rand, having presented satisfactory reports of their progress in their studies, were reappointed to their respective fellowships for the year 1883–84. The two vacancies remaining in the Parker Fellowships were at first filled by the appointment of

James Laurence Laughlin, Ph.D., 1876, and
William Patten, S.B., 1883;

but Dr. Laughlin having withdrawn, on his appointment as Assistant Professor in Political Economy, his fellowship was given to

Harold North Fowler, A.B., 1880.

The Harris Fellowship and the Rogers Scholarship are bestowed in accordance with recommendations of the College Faculty, and are under the supervision of that Faculty.

All which is respectfully submitted.

JAMES MILLS PEIRCE.

To the President of the University:

Sir, — As Dean of the Faculty of Theology, I respectfully submit the following Report for the academic year, 1882–83: —

Twenty-nine students were connected with the School during the year, namely: —

Resident Graduates	5
Senior Class	8
Middle Class	5
Junior Class	4
Special Students	7

Of these, one resident graduate and one special student remained in the School but a short time.

The nature and amount of the instruction given may be learned from the accompanying table, pp. 84, 85.

Several courses were attended by undergraduates of the College. These are reckoned together with the students of the School in the numbers which, in the table just referred to, represent the attendance at each course. The courses thus attended by undergraduates, and the number of undergraduates attending them respectively, are as follows: —

Junior Hebrew	2
Philosophy of Religion	3
History of the Reformation	24
Ethics	5
Quotations from the Old Testament	1

Some of the professors of the School gave other courses which are not referred to in the table, either because they do not belong strictly to the Theological course, or because no divinity students attended them. Professor Toy gave lessons in the Arabic language, and Professor Lyon in the Assyrian, each two hours a week. Each of these courses was attended by one divinity student, as well as by others not connected with the School. Professor Emerton gave a course on "Practice in the Study and Use of Historical Sources;" two hours a week.. This was attended by four undergraduates and one candidate for the degree of Doctor of Philosophy.

The course last mentioned, the courses on Aramaic, on the "Quotations from the Old Testament in the New," and those on the Assyrian and Arabic languages, were announced as optional; the two latter being foreign to the specific work of the School, and the rest being regarded as less essential to it than the studies that were required. This distinction was, however, looked upon as artificial and temporary.

Besides the courses that formed the regular work of the School, two special shorter courses were given during the year. One of these consisted of eight lectures by George T. Ladd, D.D., of Yale College, on the Inspiration of the Bible. These were fully attended by students of the School, and by persons unconnected with it, and were listened to with great interest.

Another course was given by gentlemen connected with the University, but not teachers of the School. In this course lectures were given as follows: —

On the Education of the Ministry: President C. W. ELIOT.
Negative Preaching: Professor A. P. PEABODY.
English in the Pulpit: Professor A. S. HILL.
The Function of a Library in a Community of Professional Students: JUSTIN WINSOR, *Librarian.*
Parish Botany: Professor G. L. GOODALE.
The Boundary Line between Science and Religion: Professor TROWBRIDGE.
The Physical Exercise suitable to a Minister's Life: Professor D. A. SARGENT.

These lectures were given in the chapel of the School, which in every case was well filled and sometimes crowded. They were not only important in themselves, but were interesting as showing the help which the School may receive from persons engaged in other departments of study. Each lecturer spoke wholly from his own standpoint, and thus threw fresh light upon the topics considered.

The lectures by Professor Lyon on Assyrian antiquities with reference to the illustration of the Old Testament were also

Instructor.	Subjects and Methods of Study.	Number of Students.	Exercises per Week.
	JUNIOR CLASS.		
Prof. Abbot.	Textual Criticism of the New Testament; Exegesis of the Gospel of Matthew (with comparison of the other Gospels), chapters i.–viii. Lectures and Recitations. Dissertations by students.	7	2
Prof. Peabody.	The Structure and Analysis of Sermons.	5	1
Prof. Peabody.	The Philosophy of Religion. Caird's Philosophy of Religion. Schleiermacher's Reden über die Religion. Lectures.	11	1
Prof. Emerton.	The Conflict of Christianity with Paganism to about A.D. 800.	6	2
Prof. Lyon.	Hebrew Inflections (Davidson's grammar), with reading from the Pentateuch and Psalms, and occasional Exegesis. Written renderings of Hebrew into English, and of English into Hebrew. Brief Lectures on the Ethics of the Old Testament.	5	3
Prof. Lyon.	Lectures on Assyrian Antiquities, with special reference to the illustration of the Old Testament.	4	1
Mr. Jones.	Elocution. Class exercises.		
	MIDDLE CLASS.		
Prof. Abbot.	Exegesis of the Gospel of Matthew, chapters xiv.–xxviii. Critical Introduction to the Gospel of John, and Exegesis of chapter i.	7	2
Prof. Everett.	Studies in the Comparative History of Religions (particularly the Vedic, the later Brahmanic, the Buddhist, the Mazdean, and the Chinese).	8	2
Prof. Everett.	Systematic Theology begun; The Psychological Basis of Religious Faith.	6	1
Prof. Toy.	Hebrew Syntax (Ewald). Reading from the Prophetical and Poetical Books of the Old Testament. Lectures on Old Testament Textual Criticism, with written exercises.	7	2
Prof. Peabody.	Homiletics; Sermons preached by students before the two upper classes and criticised by students and teachers.	15	1

MIDDLE CLASS — CONTINUED.

Prof. Peabody.	Ethics; The Application of Ethical Theory to Social Reforms; Studies of the Problems of Charity, Temperance, Labor, Divorce, etc.	13	1
Prof. Emerton.	History of the Protestant Reformation and the Roman Catholic Reaction.	39	2
Mr. Jones.	Elocution. Class exercises as above.		

SENIOR CLASS.

Prof. Abbot.	Exegesis of the Gospel of John, chapters v.–xxi.; Critical Introduction to the Epistle to the Romans, and Exegesis.	8	2
Prof. Everett.	Systematic Theology continued; The Content of Christian Faith.	10	3
Prof. Toy.	Lectures on the Criticism of the Pentateuch. Theology of the Old Testament. (Schultz's Alttestamentliche Theologie).	8	1
Prof. Toy.	Lectures on the Quotations from the Old Testament in the New Testament.	6	2
Prof. Peabody.	Homiletics, as above, in connection with the Middle Class.		
Prof. Peabody.	Liturgics; The History of Worship.	7	1
Prof. Peabody.	Pastoral Care and the Conduct of Public Worship. Twelve Lectures.	11	
Prof. Emerton.	History of the Protestant Reformation and the Roman Catholic Reaction (with the Middle Class, as above).		
Mr. Jones.	Elocution. Private instruction. Each student thirty minutes per week.		

GENERAL EXERCISES.

Preaching by a student, once a week, in the Chapel of the School, open to the public.
Extempore speaking; each speaker being criticised in the presence of the School. Once in two weeks.
Conference meetings, conducted by students, once in two weeks (alternating with the above).
Morning prayers, conducted by teachers and students.

largely attended by persons not connected with the School. The number of attendants given in the table refers merely to the students who made it a regular part of their studies and submitted to an examination upon it.

I have in a former Report called attention to the fact that the special students of the School represent two distinct classes of scholars. Under the same name are enrolled men who cannot pass the required examinations for entering as candidates for the degree of Bachelor of Divinity, and men of high scholarship who are drawn to the School for some special courses of study. The fact that the degree of Master of Arts is now given to students otherwise properly qualified for a year of theological study will probably tend to increase the number of this latter class. Two special students already bachelors of arts, received at the last Commencement the degree of Master of Arts.

The most important question which the Faculty has been called upon to decide during the year is that of allowing to students a certain amount of choice in the studies that shall be offered by them for the degree of Bachelor of Divinity. The Faculty were not drawn to the consideration of this question by any merely theoretic interest, although it might well deserve consideration as a matter of fundamental importance in the theory of theological education. The question was forced upon them by a practical necessity. It was found that owing to the increase in the teaching force of the School, and to the ability and readiness of some teachers to offer more lectures than could regularly be expected of them, more hours of class-work were offered than could reasonably be required of students. While thirty-nine hours were offered, it was thought that thirty hours were as many as should be required for the degree. These would give each student an average of ten hours a week for three years. Of course more hours then could be taken by any student without taxing too severely his power of study. The work of a theological student, however, is very imperfectly done, unless some margin is left for independent study, beyond that absolutely required by his class exercises. In fixing the number of hours that shall be insisted upon, enough should be required to insure a proper use of the time, and to furnish evidence that the degree has not been given for inadequate work; and not so many as to leave the student no freedom for that thought and research which will contribute so much to his mental growth.

If out of thirty-nine hours of class-work only thirty shall be required, it becomes an important question what disposition shall be made of the rest. Two courses are open. One is to name certain hours that shall be required, and to leave the rest optional. This was done provisionally in reference to the studies of the last year. This course does, however, injustice both to the studies marked optional and to the degree itself. It does injustice to the studies marked optional, not merely by the appearance of underrating their importance, but especially through the fact that if the student is pressed for time these will be the studies that must suffer. It does injustice to the degree, by excluding from the studies that will be accepted for it those that mark a special degree of attainment in certain directions. There are good reasons, for instance, why Aramaic should not be required; there are none why it should not be accepted for the degree. The degree that may be given for the amount of Hebrew ordinarily studied, and not for an extension of this line of work into the Aramaic, seems marked by this fact as a degree to be given for elementary rather than for advanced study. All the courses marked optional would naturally belong to this class; that is, they would naturally be of a kind to indicate special advance in certain directions, and thus a marked excellence in some lines of study. Certainly the requirements for the degree should be elastic enough to meet these conditions.

If election is to be allowed, a further question is whether it shall be absolute within the limits of the courses offered; or narrowed by the designation of one or more studies that shall be required, while freedom of choice shall extend to all the rest. In regard to this, it may be stated that there was a wide difference of opinion in the Faculty. This difference was both in regard to the advantage of requiring any studies in particular, and, among those who favored such requirement, in regard to the studies which should be marked as essential.

The result was that no studies were designated as specially to be required. Students are to be allowed to select the courses that they will offer for the degree. Such selection is, however, to be submitted to the Faculty for approval. The only rule that the Faculty laid down for its own guidance in the matter, is that no one of the fundamental departments of theological study should be neglected.

The choice thus granted is too small to be dignified by the name of an elective system. It is enough, however, to be of real advantage to students. The studies required for preparation for the ministry are of a different nature from those required by any other profession. There is little that is technical. The studies are more of the nature of those which belong to the college. They all open possibilities much greater than any student can accomplish. The line drawn in any case is to a great extent arbitrary. There can be no reason, then, why the student may not be allowed to draw it to some extent for himself. He can thus follow his own tastes, and gain more real good than if he were compelled to follow a prescribed routine. Thus, so far as this liberty extends, it may be expected to produce the same kind of beneficial effects that have resulted from the introduction of the elective system into the College. It will be noticed that the rule which the Faculty has laid down for itself is very vague. This vagueness was intentional. The movement is in some degree an experiment. As the matter stands, the Faculty is left free to adapt its action to the needs that may arise. The rule will, however, doubtless be interpreted in a liberal manner.

Another advantage of the change that has thus been made is, that the student will be able to select his own methods of work, and to group the studies of any one year in such a way as may seem to him best. There is indeed a possible logical order in the studies that make up the course in Theology. This, however, cannot be carried out strictly; and the schools that have done most in this direction have made only an approach to a true logical order. Where this has been done most thoroughly, one great inconvenience has been felt. To many students, work very largely in one direction for a whole year has proved monotonous. Especially has this been found true of the year spent in exegetical study. The habit of the Harvard School has been, for the most part, to make no attempt at logical order of study. All the fundamental branches of study have been carried on through the three years. Of late the attempt has been made to bring the study of Systematic Theology, so far as possible, into the last year. In other respects, studies have been carried on side by side as before. In fact, different students need different methods. Some work best if their labor can be concentrated on a single department. Others need various degrees of variety in their work. As the matter now stands, the opportunity is given to each student to adopt such a method as he may prefer. At the same time the Faculty is relieved of the difficult task of dividing the studies into three equal parts, corresponding to the three years of the course. The studies will henceforth be arranged according to departments, and not according to years.

The change thus described marks the completion of a movement in the direction of a larger liberty, that has been going on in the School for the last few years: first, the habit of marking absences from lectures was given up; next, a similar freedom was established in regard to attendance at morning prayers. A person looking at the School merely from the outside would not suspect that any change had been made. Absence from lectures is very rare, and the attendance at chapel is as good as when the monitor was present. The liberty now granted in regard to the choice of studies, and of method in study, will doubtless bring as little disorder into the work of the School as the changes above referred to.

The School is to be congratulated on the fact that Joseph Henry Thayer, D.D., has accepted a position in the School as lecturer on Biblical Theology. His course will extend through the year, and will be reckoned among the studies that will be accepted for the degree of Bachelor of Divinity.

During the last two years Divinity Hall has been very much improved. Summer before last, the chapel was refurnished and decorated, and is now a pleasant and attractive place, wholly suited to its purpose. The last summer other parts of the Hall have been improved. The entries have been made much lighter, both by day and evening, and seem thereby to have been made broader; the vestibules have been enlarged and other important changes made. The field at the north of the building has been levelled. This not only improves the appearance of the locality, but will in time furnish a very convenient place for out-of-door sports.

The Library has been well cared for the past year by A. A. Brooks, A.B., the Librarian. Seventy-three volumes have been added to the Library during the year, of which forty-three were gifts. The card-catalogue has increased slowly. A larger force needs to be employed in the work of cataloguing, as it is a very serious as well as important undertaking.

The recent decision of the Supreme Court in regard to the

Williams Fund is a very fortunate one for the School. It not only secures the fund to the purpose for which it was designed, but allows the society having it in charge to use any surplus that may accrue, for the general interests of the School. Much good may be expected from this source.

C. C. EVERETT, *Dean*.

To the President of the University:

Sir,—I beg to submit the following Report upon the Law School for the academic year 1882–83:—

The table on pp. 92, 93 gives the courses of study and instruction during the year, the names of the instructors, the text-books used, the number of exercises per week in each course, and the number of students who offered themselves for examination in each course at the end of the year.

The following table exhibits the attendance at the School during the last twelve years:—

	1870–71.	1871–72.	1872–73.	1873–74.	1874–75.	1875–76.	1876–77.	1877–78.	1878–79.	1879–80.	1880–81.	1881–82.	1882–83.
Whole no. of students in the School	165	138	117	141	144	178	199	196	169	177	161	161	138
Number that were in the School during the whole year	107	107	109	121	130	158	168	172	137	138	136	139	120
Number that were in the School only part of the year	58	31	8	20	14	20	31	24	32	39	25	22	18
Average number	136	123	113	131	137	168	184	183	154	157	149	146	129

The following table exhibits the School as divided into classes since the establishment of the three-years' course and the examination for admission:—

	1877–78.	1878–79.	1879–80.	1880–81.	1881–82.	1882–83.
First Year	72	63	78	57	61	59
Second Year . . .	79	50	32	58	41	38
Third Year. . . .	—	—	21	14	25	20
Special Students. .	31	47	46	32	34	21

In regard to the foregoing table it is to be observed that, although the three-years' course went into operation at the beginning of 1877–78, there was no third-year class until 1879–80. It is also to be observed that the second-year class of 1877–78 did not take the three-years' course, but was graduated at the end of the second year, that class having entered the School before the three-years' course went into operation.

The following table exhibits the results of the examinations for admission in each year since they were established: —

	1877-78.	1878-79.	1879-80.	1880-81.	1881-82.	1882-83.
Offered . .	16	15	18	25	19	12
Admitted .	7	7	12	18	16	10

The following table exhibits the results of the examinations for a degree in each year since the establishment of the three-years' course: —

	1877-78.			1878-79.			1879-80.			1880-81.			1881-82.			1882-83.		
	Offered.	Passed.	Failed.	Offered.	Passed.	Failed.	Offered.	Passed.	Failed.	Offered.	Passed.	Failed.	Offered.	Passed.	Failed.	Offered.	Passed.	Failed.
First Year . .	66	51	15	50	42	8	73	69	4	45	43	2	49	44	5	46	44	2
Second Year .	66	47	19	40	39	1	28	26	2	49	46	3	38	37	1	36	34	2
Third Year . .							22	18	4	18	18	0	36	33	3	21	19	2

In regard to the foregoing table, it is to be observed that it includes no special students, and hence that all the applicants included in it were either graduates of colleges or had passed the examination for admission. Of course this remark does not apply to the second-year class of 1877–78, and this accounts in part for the much greater number of failures in that class.

The following table exhibits the number of students who, since the establishment of the three-years' course, have been examined

Instructors.	Studies and Text-books.	Exercises per week.	Number of students examined.
	FIRST YEAR.		
Prof. Gray.	Real Property. No text-book.	2	54
Prof. Langdell.	Contracts. Langdell's Cases on Contracts.	3	50
Prof. Holmes. Prof. Ames.	Torts. Ames's Cases on Torts.	2	49
Mr. Fessenden.	Criminal Law and Criminal Procedure. No text-book.	2 *	46
Prof. Ames.	Civil Procedure at Common Law. Ames's Cases on Pleading.	2 †	45
	SECOND YEAR.		
	HONOR COURSE.		
	Required Subjects.		
Mr. Brandeis.	Evidence. No text-book.	2	32
Prof. Langdell.	Jurisdiction and Procedure in Equity. Langdell's Cases in Equity Pleading.	2	32
Prof. Gray.	Property. No text-book.	2	32
Prof. Ames.	Trusts. Ames's Cases on Trusts.	2	32
	Elective Subjects.		
Mr. Barnes.	Sales of Personal Property. Langdell's Cases on Sales.	2	19
Prof. Ames.	Bills of Exchange and Promissory Notes. Ames's Cases on Bills and Notes.	2	12
	ORDINARY COURSE.		
	Elective Subjects.		
Mr. Brandeis.	Evidence. No text-book.	2	8
Prof. Langdell.	Jurisdiction and Procedure in Equity. Langdell's Cases in Equity Pleading.	2	3
Prof. Gray.	Property. No text-book.	2	7
Prof. Ames.	Trusts. Ames's Cases on Trusts.	2	4
Mr. Barnes.	Sales of Personal Property. Langdell's Cases on Sales.	2	6
Prof. Ames.	Bills of Exchange and Promissory Notes. Ames's Cases on Bills and Notes.	2	3

THIRD YEAR.

HONOR COURSE.

Required Subjects.

Prof. Langdell.	Jurisdiction and Procedure in Equity. Langdell's Cases on Equity Jurisdiction.	2	11
Prof. Ames.	Partnership and Corporations. Ames's Cases on Partnership.	2	11
Prof. Holmes. Prof. Langdell.	Suretyship and Mortgage. No text-book.	1	11
	Elective Subjects.		
Prof. Gray.	Conflict of Laws. No text-book.	1*	1
Mr. Adams.	Constitutional Law. No text-book.	1†	1
Prof. Holmes. Prof. Gray.	Agency and Carriers. No text-book.	1	8
Prof. Gray.	Wills and Administration. No text-book.	1	5
Prof. Gray.	Law of Persons. No text-book.	1	5
Prof. Holmes.	Jurisprudence. No text-book.	1*	0
Prof. Ames.	Bills of Exchange and Promissory Notes. Ames's Cases on Bills and Notes.	2	8
Mr. Barnes.	Sales of Personal Property.	2	5
	ORDINARY COURSE.		
	Elective Subjects.		
Prof. Langdell.	Jurisdiction and Procedure in Equity. Langdell's Cases on Equity Jurisdiction.	2	7
Prof. Ames.	Partnership and Corporations. Ames's Cases on Partnership.	2	11
Prof. Gray.	Conflict of Laws. No text-book.	1*	2
Mr. Adams.	Constitutional Law. No text-book.	1†	2
Prof. Holmes. Prof. Gray.	Agency and Carriers. No text-book.	1	8
Prof. Gray.	Wills and Administration. No text-book.	1	10
Prof. Gray.	Law of Persons. No text-book.	1	8
Prof. Holmes. Prof. Langdell.	Suretyship and Mortgage. No text-book.	1	2
Prof. Holmes.	Jurisprudence. No text-book.	1*	0
Prof. Ames.	Bills of Exchange and Promissory Notes. Ames's Cases on Bills and Notes.	2	9
Mr. Barnes.	Sales of Personal Property. Langdell's Cases on Sales.	2	7

* For the first half of the year.

† For the last half of the year.

for a degree in the studies of any year without having been members of the School during that year: —

	1877-78.			1878-79.			1879-80.			1880-81.			1881-82.			1882-83.		
	Offered.	Passed.	Failed.	Offered.	Passed.	Failed.	Offered.	Passed.	Failed.	Offered.	Passed.	Failed.	Offered.	Passed.	Failed.	Offered.	Passed.	Failed.
First Year . .	5	2	3	3	2	1	6	4	2	6	4	2	2	1	1	3	3	0
Second Year .							1	1	0									
Third Year .							5	4	1	4	4	0	10	8	2	3	2	1

The following table exhibits the results of the examinations for the honor degree in each year since it was established: —

	1878-79.			1879-80.			1880-81.			1881-82.			1882-83.		
	Offered.	Passed.	Failed.	Offered.	Passed.	Failed.	Offered.	Passed.	Failed.	Offered.	Passed.	Failed.	Offered.	Passed.	Failed.
Second Year.	26	12	14	17	7	10	39	16	23	27	11	16	32	11	21
Third Year .				9	7	2	5	3	2	13	10	3	11	10	1

The following table exhibits the number of students who have entered the School in each year during the last twelve years, and shows how many of them were graduates of colleges, and of the latter, how many were graduates of Harvard and how many of other colleges: —

	1870-71.	1871-72.	1872-73.	1873-74.	1874-75.	1875-76.	1876-77.	1877-78.	1878-79.	1879-80.	1880-81.	1881-82.	1882 83.
Whole number of entries .	105	92	87	95	102	119	128	111	102	124	91	97	84
Graduates of colleges . .	60	56	47	58	55	67	77	79	62	76	60	53	56
Harvard graduates . . .	19	26	22	29	40	39	47	47	38	59	41	29	33
Graduates of other colleges.	41	30	25	29	15	28	30	32	24	17	19	24	23
Non-graduates	45	36	40	37	47	52	51	32	40	48	31	44	28

At the close of the year 1882–83 an event took place which is likely to exert a great and lasting influence upon the prosperity of the Law School; namely, its removal from Dane Hall to Austin Hall. One year ago no department of the University —

at all events, no one of those situated in Cambridge — was so badly housed as the Law School; and that circumstance doubtless had its influence in diminishing the prosperity of the School. Now, thanks to the munificence of Mr. Austin, the School has its home in a building which, in its provisions for material comfort, need not fear comparison with any other, and which, in architectural beauty and adornment, excels all others belonging to the University.

C. C. LANGDELL, *Dean.*

AUSTIN HALL, Nov. 30, 1883.

TO THE PRESIDENT OF THE UNIVERSITY:

SIR, — As Dean of the Medical Faculty, I submit the following Report upon the Medical School for the academic year 1882–83: —

The whole number of students in attendance during the year was two hundred and forty; during the first term two hundred and thirty-four; during the second term two hundred and nineteen. Of these, one hundred and sixteen had a literary or scientific degree. There were eighty-five applicants for the degree of Doctor of Medicine, of whom nine were rejected. Seventy received the degree of M.D. after a three years' course of study; six received the degree of M.D. after a four years' course; of these six, four received in addition the degree of A.M., two of these *cum laude*. The Fourth Class was composed of ten students, four of whom postponed graduation in order to become candidates for hospital appointments. One of the Barringer Scholarships was awarded to Ashbury Gilbert Smith of the fourth class. The Faculty Scholarships were awarded to Oscar Joseph Pfeiffer and Leonard Wood of the third class, and to Owen Colburn and Willis Willard Copp of the second class. The Bright Scholarship was awarded to Charles Wendell Townsend of the second class.

The table on pages 96–98 shows the amount and character of the instruction given.

The results of the examinations for admission to the School are given in the following table: —

			Physics.	Latin.	English.	Elective.	Rejected.
1883.	June	Offered	25	25	25	25	3
		Conditioned	8	8	4	8	
	Sept.	Offered	18	18	18	18	1
		Conditioned	2	9	4	2	

COURSES OF INSTRUCTION FOR 1882–83.

Instructors.	Subjects.	Exercises per Week.	No. of students examined.
	FIRST CLASS.		
Prof. Holmes and Dr. Dwight	Descriptive Anatomy	Four till May.	71
Drs. M. H. Richardson, Otis, and Mixter	Practical Anatomy, with Exercises in Dissection	Fifteen, January till May.	
Drs. Whitney and Quincy	Laboratory Exercises in Histology	Two till May.	
Dr. C. S. Minot	Embryology	Twelve Lectures.	
Prof. Bowditch	Systematic and Experimental Physiology	Four.	74
Dr. J. W. Warren	Laboratory Exercises in Experimental Physiology	November till May.	
Dr. Hills	General and Analytical Chemistry	Two, with ten additional exercises.	60
Dr. Hills	Practical Exercises in the Laboratory for General Chemistry	Six.	
	SECOND CLASS.		
Dr. Dwight	Topographical Anatomy	One.	75
Drs. M. H. Richardson, Otis, and Mixter	Practical Anatomy, with Exercises in Dissection	Five till May.	
Prof. Wood	Medical and Toxicological Chemistry	Two.	69
Prof. Wood and Dr. Emerson	Practical Exercises in the Laboratory for Medical Chemistry	Six.	
Dr. Bolles	Materia Medica, with Practical Demonstrations	One.	75
Prof. Fitz	General Pathology and Pathological Anatomy	Two.	73
Prof. Fitz	Special Pathological Anatomy, with Demonstrations	Two.	
Drs. Whitney and Gannett	Laboratory Exercises in Pathological Histology	Two till April.	
Prof. Fitz and Dr. Gannett	Practical Instruction in performing Autopsies	Throughout the year.	
Profs. Minot and Edes	Clinical Medicine	Four.	
Drs. Mason, Shattuck, and Garland	Practical Instruction in Auscultation and Percussion	Six first half-year.	
Asst. Prof. Knight	Practical Diagnosis and Treatment of Diseases of the Larynx	Six first half-year.	
Asst. Prof. Warren	Recitations in Surgical Pathology	One first half-year.	
Asst. Prof. Warren	Recitations in Surgery	One second half-year.	

SECOND CLASS — CONTINUED.

Asst. Prof. Warren	The Application of Bandages and Apparatus	One second half-year.	
Drs. Whitney and Gannett	Laboratory Exercises in Surgical Histology	Two after March.	
Asst. Prof. Porter	Clinical Surgery	Two first half half-year.	
Prof. Cheever	Clinical Surgery	Two till April.	
Asst. Prof. Porter	Clinical Surgery	Two second half-year.	

THIRD CLASS.

Prof. Edes	Therapeutics	Three.	
Prof. Reynolds	Theory and Practice of Obstetrics	Three.	78
Asst. Prof. W. L. Richardson	Recitations in the Theory and Practice of Obstetrics	One.	65
Asst. Prof. W. L. Richardson	Operative Obstetrics	Twelve practical exercises.	
Asst. Prof. W. L. Richardson	Practical Instruction in Clinical Obstetrics	Throughout the year.	
Prof. Minot and Dr. Whittier	Theory and Practice of Physic	Five.	
Profs. Minot and Edes	Clinical Medicine	Four.	65
Prof. Cheever	Surgery and Clinical Surgery	Two first half-year.	60
Prof. Cheever	Clinical Surgery	Two till April.	62
Asst. Prof. Porter	Surgical Anatomy and Operative Surgery	Fifteen practical exercises.	61
Asst. Prof. Porter and Dr. Otis	Operative Surgery	One.	
Prof. Williams	Diseases of the Eye	One.	
Prof. Williams	Clinical Ophthalmology	One till January and after March.	
Prof. White	Diseases of the Skin	One.	
Prof. White	Clinical Dermatology	One.	
Asst. Prof. Baker	Gynaecology	Two.	
Asst. Prof. Baker	Clinical Gynaecology	Two second half-year	
Dr. Davenport	Clinical Gynaecology	Two first half-year.	
Dr. Greenough	Practical Diagnosis and Treatment of Syphilis	One.	
Dr. Green	Pracical Diagnosis and Treatment of Diseases of the Ear	One, January till April.	
Dr. Blake	Anatomy, Physiology, and Diseases of the Ear	Two for three months.	
Dr. Oliver	Practical Diagnosis and Treatment of Diseases of Children	One first half-year.	
Dr. Rotch	Practical Diagnosis and Treatment of Diseases of Children	One for six months.	
Dr. Webber	Practical Diagnosis and Treatment of Diseases of the Nervous System	One till February.	

COURSES OF INSTRUCTION FOR 1882–83 — CONTINUED.

Dr. Putnam	Practical Diagnosis and Treatment of Diseases of the Nervous System	One.	
Dr. Folsom	Mental Diseases	Eight Lectures.	
Dr. Draper	Forensic Medicine, with Demonstrations	Twelve Exercises.	
	FOURTH CLASS.		
Dr. Draper	Clinical Medicine	One.	
Dr. Garland	Clinical Medicine	One.	
Dr. Mason	Clinical Medicine	One for three months.	
Asst. Prof. Warren	Clinical Surgery	One, three and a half months.	
Asst. Prof. Porter	Clinical Surgery	One after February.	
Asst. Prof. Porter and Dr. Otis	Operative Surgery	Practical Exercises.	9
Dr. Bradford	Orthopedic Surgery	Two in November and December.	
Prof. Reynolds	Obstetrics	One.	
Asst. Prof. W. L. Richardson	Clinical Obstetrics	Two for six months.	5
Asst. Prof. W. L. Richardson	Operative Obstetrics	Practical Exercises.	
Prof. Williams	Clinical Ophthalmology	Two for six months.	4
Dr. Wadsworth	Ophthalmoscopy	One for four months.	
Prof. White	Dermatology	One.	8
Prof. White	Clinical Dermatology	Three.	
Asst. Prof. Baker and Dr. Davenport	Clinical and Operative Gynaecology	Six.	5
Dr. Chadwick	Clinical Gynaecology	Three.	
Drs. Oliver and Rotch	Diseases of Children	Three.	5
Drs. Webber and Putnam	Diseases of the Nervous System	Two.	8
Asst. Prof. Folsom	Mental Diseases	One.	8
Dr. Knight	Laryngology	Three for two months.	5
Dr. Blake	Otology	Two for three months.	5
Dr. Green	Otology	Two for three months.	
Dr. Draper	Forensic Medicine	One.	4
Dr. Harris	Forensic Medicine	Demonstrations.	
Dr. Greenough	Syphilis	Two.	5
Dr. Homans	Ovarian Tumors	Six lectures; Clinical Exercises.	
Boston Cooking School	Cookery	Six Exercises.	

JUNE EXAMINATIONS. — STATISTICS OF REJECTION.

		FIRST CLASS.						SECOND CLASS.								THIRD CLASS.											
		Anatomy.		Physiology.		General Chemistry.		Medical Chemistry.		Materia Medica.		Path. Anatomy.		Topo. Anatomy.		Theory and Practice.		Clinical Medicine.		Surgery.		Clinical Surgery.		Therapeutics.		Obstetrics.	
			Per ct.		Per ct.		Per ct.		Per ct.		Per ct.		Per ct.		Per ct.		Per ct.		Per ct.		Per ct.		Per ct.		Per ct.		Per ct.
1880	Passed	77		81		52		46		70		62				58		53		65		59		56		56	
	Rejected	15	16	27	25	15	22	11	19	18	15	11	15			9	13	10	15	1	1	11	15	13	18	9	13
	Total	92		108		67		57		83		73				67		63		66		70		69		65	
1881	Passed	58		42		37		70		69		77				74		67		73		77		82		66	
	Rejected	8	12	19	31	10	21	9	11	15	17	11	12			5	6	16	19	8	8	1	1	8	8	14	17
	Total	66		61		47		79		84		88				79		83		76		78		90		80	
1882	Passed	60		62		38		64		46		54		52		74		82		82		80		64		69	
	Rejected	10	14	13	17	10	20	7	9	15	24	11	16	3	5	9	10	5	5	2	2	3	3	5	7	15	17
	Total	70		75		48		71		61		65		55		83		87		84		83		69		84	
1883	Passed	63		62		53		62		64		62		69		60		58		57		61		69		59	
	Rejected	8	11	12	16	7	12	7	10	11	15	11	15	6	8	5	8	2	3	5	8	0	0	9	11	6	9
	Total	71		74		60		69		75		73		75		65		60		62		61		78		65	

FOURTH CLASS.

		Ophthalmology.		Dermatology.		Gynaecology.		Obstetrics.		Clinical & Operative Obs.		Diseases of Children.		Diseases of Nervous System.		Mental Diseases.		Forensic Medicine.		Otology.		Laryngology.		Syphilis.		Operative Surgery.	
1881	Passed	9		7		8				7		9		9		9		9		8		9		9		9	
	Rejected	0	0	2	22	1	11			2	22	0	0	0	0	0	0	0	0	1	11	0	0	0	0	0	0
	Total	9		9		9				9		9		9		9		9		9		9		9		9	
1882	Passed	7		7		7		6		6		7		6		6		7		8		7		7		8	
	Rejected	1	12	0	0	0	0	1	14	1	14	0	0	1	14	1	14	0	0	0	0	0	0	0	0	0	0
	Total	8		7		7		7		7		7		7		7		7		8		7		7		8	
1883	Passed	4		4		5				5		5		8		8		4		5		5		5		9	
	Rejected	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	4		4		5				5		5		8		8		4		5		5		5		9	

The table on page 99 gives a statement of the rejections at the annual examinations in June for four years past.

The following table shows the increasing recognition of the value of the opportunities offered by the School for obtaining a medical education: —

NUMBER OF TERMS SPENT AT THE SCHOOL BY GRADUATES.

	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.
Spent six terms	22	14 47%	25 69%	40 65%	41 85%	62 88%	39 86%	49 81%	79 91%	67 88%
Spent five terms	2	7	5 1%	9	4	2 2%	1 2%	6 10%	2 2%	4 5%
Spent four terms	6	6	4 11%	8	8	3 4%	4 8%	4 6%	4 4%	4 5%
Spent three terms	5	0	2 5%	1	0	2 2%	0	1 1%	0	1 1%
Spent two terms	3	8 10%	0	3	0	1 1%	1 2%	0	1 1%	0
Total graduated	38	30	36	61	48	70	45	60	86*	76†

* Includes nine students of the Fourth Class.

† Includes six students of the Fourth Class.

The most important event of the year in the history of the School is the retirement of Dr. O. W. Holmes from the Professorship of Anatomy, which he has held since 1847. Although the withdrawal of this gifted teacher, as well as that of Dr. Bigelow in the preceding year, must of course be felt as a serious loss by the School to which they have so long given their valued services, yet the work which they have laid down has been taken up by able and willing hands, and it is believed that the instruction in Anatomy and Surgery, though it may perhaps lack some of the peculiar brilliancy and charm imparted to it by these distinguished professors, still fully sets forth the present state of our knowledge in these important branches.

A fire which occurred in the New Building of the Medical School on Boylston Street during the course of its construction, so far delayed our occupation of it that the whole work of the School in the past year was carried on in our old quarters in North Grove Street.

H. P. BOWDITCH, *Dean.*

To the President of the University:

Sir, — As Dean of the Dental Faculty I beg leave to submit my Report for the year 1882–83: —

The number of students was twenty-six, — thirteen of the first year, six of the second, and seven of the third.

The students of the first year, as usual, attended the medical lectures of this year in connection with the medical students, and passed with them the examinations. Five failed to pass these examinations, of whom three failed utterly in all three subjects, one in two subjects, and one in one. Those who fail to pass in two of the three are not permitted to go on with the class, but must take the year's work again. They can, however, try again at the September Examinations. One did so, and succeeded in passing. The studies for the year were General Anatomy, including dissections, Physiology, and General Chemistry.

Twelve lectures in Surgical Pathology and three in Surgery are required of the second-year students, which are also had in connection with the medical students. One only failed to pass the examination.

The School has this year been without a Professor of Operative Dentistry, the place vacated by Professor Shepard at the expiration of the previous year not having been filled. The duties have been performed by the Dean, in addition to those of his own professorship, by delivering eighteen lectures of about an hour and a half each on the subjects appertaining to this branch. He has been ably assisted in the clinical instruction by the five clinical instructors and the Demonstrator, who have faithfully and conscientiously performed the duties of their offices. This body was organized with a chairman as a board of instruction at the beginning of the year, the Dean being a member *ex officio*, and met once a month for consultation and comparison of notes, thus keeping the progress and standing of each student in view of the whole body throughout the year. This plan has worked so well that it is proposed to continue it. The out-patients department of the Massachusetts General Hospital has been used for the purposes of this department, and at no time has there been a lack of patients. In March operations were begun upon the foundations of the new out-patients department, and a portion of the outer wall was removed, exposing both instructors and patients to the inclemency of an exceptionally inclement spring. Notwithstanding, work was continued at great disadvantage until, some three weeks before the end of the term, complete cessation of work was enforced. At no time in the history of the School have so many untoward circumstances combined to hinder the work of instruction; yet such has been the devotion of the instructors that the full amount of work was accomplished.

The Demonstrator, with one of the instructors, has been in attendance on every School afternoon throughout the year to superintend the operations which are all performed by the students, and give advice and assistance whenever either was necessary.

The Professor of Mechanical Dentistry has given nineteen lectures of about an hour and a half each, alternating with lectures on Operative Dentistry, previously referred to, on the subjects pertaining to his department. He has also been present in the Laboratory for Clinical Instruction about one hour of each week during the term. The Demonstrator has also been present every School morning of the year for instruction. Patients have at no time been wanting to give the students abundant opportunities for practising every branch of this specialty.

Drs. Pond and Grant, Demonstrators respectively of Operative and Mechanical Dentistry, have performed the duties of their offices with exemplary fidelity and success.

Dr. Brackett, Assistant-Instructor in Dental Therapeutics, has given thirty hours' of instruction in his course, including the daily "quizzes" on preceding lectures, with which it has always been his custom to begin the hour. He is satisfied that this course adds greatly to the efficiency of the instruction by serving to call attention to and fix points that would otherwise inevitably be lost.

The Instructor in Oral Surgery and Pathology, Dr. J. W. Warren, has lectured one hour each week until within a few weeks of the end of the term, which were employed in the preparation and examination of specimens for the microscope.

The number of students who came up for the degree was thirteen, of whom five failed to pass.

It seems useless at this time to make any allusion to the pecuniary needs of the school, inasmuch as previous pressing appeals have produced no result. These needs are just now more pressing than ever.

In the fifteen years of the School's existence, hardly a dollar has been given to aid its advancement, except what the alumni, all young men struggling with the beginnings of their chosen profession, have wrung from their own necessities to encourage and sustain a cause in which they believe. It can be of no direct advantage to these young men to build up a School which is turning out rivals for their practice; but the elevation of their profession to a higher plane, the placing it on a level with its sister professions, so that in honoring it they themselves may be honored, is the impelling motive. A similar motive should also influence the community whom they serve; for the better the education of the members of a profession, the better the service they can render. Therefore, it would seem that the public-spirited and the charitable givers should turn at least a small rivulet from the great stream of public benefaction in our direction.

THOMAS H. CHANDLER, *Dean.*

To the President of the University:

Sir, — I have the honor to submit the following report upon the Lawrence Scientific School for the Academic year 1882–83: —

The number of students registered during the year was twenty-five. They were classified as follows: —

I. Engineering	6
II. Chemistry	1
III. Natural History	6
IV. Mathematics	1
Special Courses	11
Total	25

These students attended the exercises of thirty-nine different instructors. The whole number of courses taken, prescribed and elective, was one hundred and fourteen, an average of about four and a half to each pupil. The distribution of studies is shown by the following statement: —

Astronomy	1	Mechanics	2
Botany	4	Mechanical Drawing	7
Chemistry	19	Music	1
English	3	Philosophy	2
Fine Arts	4	Political Economy	1
French	6	Physics	8
Geology	11	Rhetoric	1
German	9	Surveying	5
Greek	2	Themes	2
History	7	Theology	1
Lithology	1	Zoölogy	7
Mathematics	10		

Five persons received the degree of S. B. at Commencement,—four in Natural History, and one in Mathematics.

H. L. EUSTIS, *Dean.*

To the President of the University:

Sir,—I respectfully submit the following Report upon the Bussey Institution for the year 1882–83:—

The usual number of students, eight, attended the various courses, and one student received the degree of Bachelor of Agricultural Science at Commencement. Instruction in Agriculture was given by Mr. Motley; in Applied Zoölogy at first by Mr. Ford and afterward by Professor Lyman, of the Veterinary School, assisted by the Bussey Demonstrator in Zoölogy, Mr. Hinckley; in Horticulture by Mr. Watson; in Botany by Mr. Faxon; in Entomology by Mr. Burgess; and in Agricultural Chemistry by Professor Storer. A brief interruption of the course in Applied Zoölogy, caused by the resignation of Professor Slade and the death of his assistant Mr. Ford, was met by Professor Lyman's volunteering to give a course of lectures on the anatomy and diseases of domestic animals to the Bussey students, and by the appointment of a new demonstrator, Mr. D. T. Hinckley, B. A. S., who took charge of the dissecting-room.

The determination of the Corporation, in May, 1883, to put the Bussey Farm to use can hardly fail to commend itself to the agricultural community, and to increase the teaching power of the School. On the appointment of Mr. Hinckley as superintendent of the farm, he proceeded to harvest and store the hay crop, and to put two of the large barns into fit condition for the reception of horses and neat-cattle, which will be taken to board when not in use by their owners. Many idle horses are thus boarded in the vicinity of Boston every winter, as well as cows not in milk, and animals recovering from lameness or the like; and it is anticipated that for these purposes the public will be glad to avail itself of the convenient position of the Bussey Farm, and of its ample and commodious buildings. It is fair to suppose, moreover, that many persons will feel such confidence in the University that they will be glad to intrust valuable animals to its care, in the assurance that they may safely consign them to officers appointed by the Corporation and trained expressly for the positions they occupy. By expending at the farm the hay grown there, manure will be obtained for fertilizing the land, while the methods of cultivation and the courses of crops necessary for procuring the largest practicable yield of hay will be constantly before the eyes of the students. The presence of many animals at the farm will be useful also for purposes of study and comparison. In the course of time, it may prove possible to raise at the farm, incidentally, as it were, some part of the vegetables consumed at the Memorial Hall in Cambridge.

By an arrangement with the Veterinary School of the University, the Bussey Institution has agreed to receive from the Veterinary Hospital in Boston and to board at the farm a certain number of convalescent animals and chronic cases which cannot be economically cared for in the city proper.

It is to be regretted that somewhat extensive repairs have had to be made upon the school building and the greenhouses, as well as upon the barns and the farm house near Roslindale.

The institution is indebted to the Honorable Ambrose A. Ranney, M. C., for the gift of many packages of seeds from the department of agriculture at Washington, which, in accordance with Mr. Ranney's request, were distributed among past and present students of the School and other persons known to be interested in testing them; and to Messrs. Schlegel & Fottler, seedsmen, of Boston, for a large number of typical specimens of seeds of vegetables, which have been placed in the Museum. It is indebted also to Dr. Harold C. Ernst, of Jamaica Plain, for the gift of forty-six solidly bound volumes of horticultural journals and other standard horticultural works, from Sarah Otis Ernst; and to Drs. D. D. Slade and C. A. Cheever and Mr. Daniel Denny for files of agricultural newspapers.

F. H. STORER, *Dean.*

To the President of the University:

Sir, — I beg to submit herewith the First Annual Report of the School of Veterinary Medicine.

My appointment to the newly created chair of Veterinary Medicine was received Sept. 14, 1882, and the work of organization was immediately undertaken.

It was decided that the School should make a beginning with the first class only; that its further development should be made year by year, as this class progressed, until the complete course of three years should be in full operation; and further, that no advanced or special students should be received until the course of study for which they might apply should have been developed in the regular course of instruction. It was arranged that of the first year's studies General Chemistry and Physiology should be given at the Medical School; all others, including the Practical Anatomy, at the Bussey Institution, — at which place the necessary class- and dissecting-rooms could be supplied. In accordance with this arrangement, notice was at once given, through a few of the Boston daily newspapers, that students would be received on and after September 28. Although this notice was very short, scarcely fourteen days being allowed, two candidates for admission presented themselves; they were, however, not able to pass the required examinations, and were therefore rejected.

On Nov. 21, 1882, the first meeting of the Faculty of Veterinary Medicine was held, and a secretary was elected.

On April 23, 1883, R. H. Harrison, D. V. S., a successful young veterinary practitioner at Lowell, was appointed instructor in Veterinary Anatomy, the duties of the position to begin in the following September.

At the examinations held in June and September, 1883, eleven candidates presented themselves for admission, of whom two were rejected. One, besides passing an excellent examination in the required English subjects, took, of the optional ones, Latin, French, and Algebra, and did himself great credit in all of them.

The Veterinary Hospital.

It very soon became evident that, if a successful school was to be established, there must be connected with it a hospital, situated at some central place within the city proper, where cases could be received and exhibited to students. As there was not at this time a single dollar at the disposition of the School, the erection of a hospital building seemed to be entirely out of the question; and about two months were consumed in a futile effort to hire a stable that would for a time at least answer the purpose, as it was considered certain that the rent could be paid from the earnings of such an establishment.

In November, 1882, I was requested to attend a meeting of a committee of the Trustees of the Massachusetts Society for Promoting Agriculture, and to give them an account of our purposes and needs. This was the first of a number of such meetings, one result of which was that $2,000 was given to the School, to be used towards defraying the first year's expense of the proposed veterinary establishment. Early during the discussions with this committee it seemed so probable that, with their aid, something would be done, that an inquiry was begun, which ended in the purchase of a vacant lot of land at the corner of Village and Lucas Streets, and in the erection upon it of a suitable building. On the suggestion of a member of this same committee, the "subscription" plan was adopted as a further source of income. Money was found to buy the land and to erect the building upon it, on condition that a friend or friends of the proposed School would guarantee a net annual income of six per cent for ten years on the investment,—no light obligation. This guaranty was ultimately furnished by Dr. William F. Whitney, of the Faculty of Medicine. Dr. Whitney further offered, if $500 in cash could be raised, to make good any deficit, over and above this amount, that might occur in the first year. Mr. Henry L. Higginson thereupon gave the School $500, the entire amount needed.

Four patients were received into the hospital before August 16; but the establishment was not in fair working condition until that day, and was not entirely finished until considerably after that time. From its opening until September 27, there have been treated in the building thirty-one (31) boarding and seventeen (17) out-patients, as follows: 35 horses, 11 dogs, 1 cow, and 1 cat.

The School also enjoys the use of commodious buildings and exercise yards at the Bussey Farm, to which convalescents are sent from the Village Street building.

During the past summer an International Veterinary Congress was held in Brussels, at which the subject of veterinary education was somewhat fully discussed, and referred to a committee consisting of M. M. Hugues, of the Belgian army, Professor Wirtz, director of the Utrecht Veterinary School, and Professor Müller, of the Berlin Veterinary School. Among other things, it was recommended that the preparatory training required for the study of veterinary medicine should be equal to that given in the highest class of a middle-class school,—*i. e.* a class in which Latin is taught, and whose graduates are admitted to universities. The English Veterinary schools are now beginning to require French or Latin in the matriculatory examination. I would suggest that after the admission examinations of 1884 have been held, this School require candidates for admission to pass a satisfactory examination in Latin, French, or German, at the option of the candidate.

CHARLES P. LYMAN, *Secretary.*

TO THE PRESIDENT OF THE UNIVERSITY:

SIR,—The cost of maintaining the University Bulletin during the year has been shared, as in previous years, by Messrs. Charles P. Curtis, William B. Weeden, Henry Lee, Alexander Agassiz, and Charles S. Sargent. The Librarian Emeritus has continued in the Bulletin his necrological record of the graduates. In addition to the *Bibliographical Contributions* mentioned in last year's Report as in progress in the Bulletin, two others have been begun by the Librarian.

1. *The Bibliography of Ptolemy's Geography*, in which an attempt has been made to show the importance of the successive editions of the *Geographia* of Ptolemy in the study of early American discovery and cartography. The publication of this contribution is likely to be continued through the present Academic year.

2. *The Kohl Collection of Early Maps*, in which an account is given of various early cartographical records of discovery, collected by the late Dr. John G. Kohl, and purchased of him by the United States Government in 1856, at a cost of nearly $6,000. So much advance has been made since Dr. Kohl formed this collection, and

appended to it his commentaries, that it has been deemed desirable to intercalate notices of other maps, so as to make the enumeration as nearly a complete list of early American maps as circumstances permit.

It may be also stated that the rearrangement of the map department of the Library outside of the American maps (which have been already arranged) has been begun.

The resignation of Mr. Samuel H. Scudder as Assistant Librarian has thrown during the year the direct charge of the Catalogue Department upon Mr. William C. Lane, who had already been charged, as explained in last year's Report, with the care of the shelving and classifying of books, since the retirement of Mr. Arnold.

Mr. Carney, working under Mr. Lane in the shelf department, reports as follows: —

> The number of volumes now permanently placed in the new stack is 73,373, being an addition of 3,104 to classifications arranged in previous years, together with the 227 volumes of the Dante Collection newly arranged.

The classification of the Greek and Latin classics, and attendant literature, has been in progress at the hands of Dr. Theodor Vetter. The scheme followed and the notation employed is explained by Mr. Lane, as follows: —

> The scheme of arrangement follows very closely that of Engelmann's *Bibliotheca Scriptorum Classicorum.* Collections of Greek authors are placed first, divided into classes according to their Latin titles, i. e. Anecdota; Oratores; Oratores Attici; Poetae; Poetae Bucolici, Didactici, Scenici, etc.; Rhetores; Scriptores; Scriptores Biographici, Geographici, Grammatici, Historici, Philosophi, etc. Immediately after each class are put philological works on authors of that class taken collectively.
>
> The collections are followed by the single authors in one alphabetical series. The arrangement of the books under each author is as follows: 1. Complete editions of works. 2. Selections. 3. Editions of separate works (alphabetically). 4. Translations: *a.* Latin; *b.* English; *c.* French; *d.* German; *e.* Italian, Modern Greek, etc. 5. Special Lexicons. 6. Commentaries and critical works, alphabetically by authors. Scholia stand together here under S. The arrangement throughout these classes is chronological, except that successive editions of the same book by the same editor or translator are kept together, taking their place according to the date of the earliest edition in this Library.

The same plan of arrangement will be carried out in the Latin authors.

Attention should be called to the fact, that this arrangement does not correspond with that of the cards in the public catalogue; each method has its advantages, and it is hoped each will prove to be best adapted to the place in which it is used. The principal points of difference are as follows: —

1. In the catalogue the translations are not all brought together apart from the texts, but all the translations of the complete works follow immediately the editions of the text of the complete works, and all translations of any separate work follow the text editions of that particular work; in other words, the primary division is according to subject-matter rather than language.

2. Editions with both text and translation are usually put with translations, instead of with texts as is done on the shelves, but a reference is inserted in the proper place among the editions of the text.

3. Among texts the arrangement is *purely chronological*, i. e. no attempt is made to keep together editions by the same editor. Among translations, on the other hand, the order is entirely *alphabetical* by translators.

4. The critical works on an author are divided according to their subject, instead of standing in one alphabetical series; e. g., under Homer the divisions are: General; Arts and Customs (including Fine Art and Science, also works on the antiquities, private life, morals, civilization, law, etc., of the Homeric age), Batrachomyomachia, Characters (including separate persons), Cyclops, Editions (criticism of), Geography, Hymns, Iliad, Illustrations, Language (grammatical questions), Lexicons, Minor Poems, Name (i. e. of Homer), Odyssey, Proper Names, Prosody, Rhetoric, Scholia, Text, Theology (including Religion, Mythology, Fate, Future Life, Psychology, etc.), Translations and Translating.

In numbering these books a new system of shelf-marks has been introduced in place of the "fixed-location" system generally adopted in the Library. Each mark is of the general form **Ga9.375**. The **G** is common to all the books under Greek authors and will be replaced by L for the Latin authors; **Ga** is common to all the authors whose names begin with *A*, the second letter varying with the initial of the author; while **Ga9** is the "author-number" common to all books by or on a particular author (in this case, Æschylus). The **.375** is the distinctive number of a particular book. In like manner the common author-number for Plato is **Gp82**, for Demosthenes **Gd15**. That part of the shelf-mark following the point is properly to be considered as a decimal, and as such will admit of indefinite additions and intercalations being made; e. g., if two books have been numbered Gh62.236 and Gh62.237 and it is desired to introduce another book between them, this will be called Gh62.2365, or any number between .2361 and .2369. For the present none of these additional figures have been employed. In the smaller authors only two places of decimals are used, in the larger three, and in the few cases where three places do not supply enough numbers two or more author-numbers have been used for one author, as for Homer, to whom Gh62, Gh63, and Gh64 have been devoted.

Mr. Carney further reports: —

During the year the collection of unbound newspapers has been arranged in bundles; and about 150 volumes were found complete enough to bind, and to be placed in the collection already arranged in the basement of the old part of the building. The duplicate volumes and pamphlets have been roughly classified in the same apartment. A portion of the lower story of the new part of the building has been shelved to hold the regular files of pamphlets, and on the new shelves these files have been arranged more conveniently than ever before.

The accessions to the University Library for the year, and the present extent of the various departments, are as follows: —

Departments.	Volumes added.	Present extent in	
		Volumes.	Pamphlets.
Gore Hall (College Library) .	8,441	210,462	206,315
Law School	583	19,984	2,852
Scientific School	28	2,428	....
Divinity School	73	16,423	....
Medical School	30	2,078	....
Museum of Zoölogy	288	15,814	9,500
Astronomical Observatory . .	153	3,070	5,692
Botanic Garden	185	4,322	2,884
Bussey Institution	60	2,477	854
Peabody Museum	77	692	759
Totals	9,818	277,700	228,856

The Whitney Library of Geology, a component part of the collection in the Museum of Zoölogy, is not yet included in the count of the Museum Library.

Of the accessions to the Gore Hall collection, there were added by gift 1,946 volumes and 6,611 pamphlets; and such accessions also include 437 volumes of bound serials (received in parts), and 576 volumes, made by binding pamphlets. The Law Library is diminished by 1,202 volumes, disposed of during the year.

The following table shows the use of books at Gore Hall in 1882–83, as compared with the last four years: —

	1878-79.	1879-80.	1880-81.	1881-82.	1882-83.
1. Books lent out	41,296	41,986	45,481	48,194	48,231
2. Used in the building	10,921	7,812	11,724	10,498	8,654
3. Overnight use of reserved books .	7,519	10,506	11,872	12,891	12,678
Total (excluding No. 3, which is included in No. 1)	52,217	49,798	57,205	58,692	56,885
Cards giving to students temporary admission to the shelves	....	60	85	200	167
Times of use of such cards	....	840	870	2,542	3,340
Officers of instruction reserving books	....	35	38	41	44
Number of books reserved	....	3,330	3,418	4,251	4,316

The increase in the number of books reserved (to which the students have unrestricted access), and the growing use of admission cards, are producing a diminution, as will be seen, in the record of books "used in the building," no record of volumes used being practicable in the other cases.

The 167 students using admission cards have been in these departments: History, 46; Science, 16; Art (including music), 14; Literature, 42; Greek and Latin authors, 36; Philosophy, 5; Theology, 3; and Political Economy, 5.

During 36 Sundays (till the long vacation came) 2,268 persons availed themselves of the opportunity of using the Library on those days, which is an average of 63 each Sunday, being an increase of 6 over last year. The hours were from one to five o'clock. The highest number on any one day was 92 against 91 last year.

The work of the catalogue department is indicated by the following table, which has been furnished by Mr. Lane: —

	1878-79.	1879-80.	1880-81.	1881-82.	1882-83.
1. Cards put into the Public Catalogue	36,890	35,815	41,215	34,168	29,480
2. Cards prepared	20,595	24,887	25,705	18,235	17,015
3. Volumes received during the year .	....	....	7,873	6,848	8,441
4. Pamphlets received during the year	....	....	....	4,469	7,650
5. Volumes (old and new) catalogued .	....	....	....	4,271	6,222
6. Pamphlets (old and new) catalogued	....	....	....	1,363	1,333

More long sets have been bought this year than usual, and this has diminished the number of catalogue-cards in proportion to the volumes received. A scarcity of money for administrative work, compared with the sum available for the purchase of books, has rendered it desirable during the year to buy costly books in larger number than usual, and to revise the shelves for the purpose of completing long sets of the publications of societies, etc. By this means some marked deficiencies in the Library have been supplied. The use of a contents-book, to take the place of enumerating long contents in the author-cards, is another cause for the diminution in the number of cards prepared. It should be borne in mind that some discrepancy of count necessarily arises from enumerating by titles and volumes respectively, at different stages of the catalogue processes.

The departmental cataloguing now done in Gore Hall covers 1,659 volumes and pamphlets for the year, beside the record slips made of books bought for the Class Rooms.

The smallness of the catalogue staff has prevented any work on the recataloguing of the titles contained in the old printed catalogue, except so far as new editions of the same book has made it convenient to treat the older editions at the same time; and it has also caused the accumulation of at least 6,000 titles among the accessions of recent years, which it has not been found possible to catalogue permanently. Temporary records of a necessarily imperfect character have, however, been made to assist in finding the books when wanted, and to guard against new purchases of the same titles.

Mr. Lane has also given his attention to working out a scheme for a numerical notation to be applied to the proposed printed index to the card catalogue, left incomplete by the resignation of Mr. Scudder; and to rearranging some parts of the card catalogue, that it may be made more consistent with the methods of shelf-arrangement now in use. Various lesser schemes for improving the details of the card catalogue, and assisting in the comprehension of its complicated system, have been also attended to.

The ordering department has still continued in charge of Mr. William H. Tillinghast.

Under the will of the late Joseph J. Cooke of Providence, this Library was one of ten libraries entitled to bid off $5,000 worth of books at the public sale of his library. The two parts of the collection already sold contained but little which we needed, and though our scale of bids was high, the prices brought were in large part above our limits. The plan of producing an artificial competition, and establishing factitious prices for books, which was adopted at this sale, in emulation of the plan first tried with advantage to the testator's estate in the Brinley sale, probably enhances the market prices of books, to the detriment of all buyers, and without any sound gain to the interests of letters. There remains a third part of the Cooke library yet to be sold.

The Library still continues to have charge of the issue of the weekly *Calendar* of the University.

JUSTIN WINSOR, *Librarian.*

TO THE PRESIDENT OF THE UNIVERSITY:

SIR, — As Director of the Herbarium I have the honor to submit the following Report: During the last Academic year 8,775 sheets of specimens have been prepared, mounted, and incorporated into the collection; and 135 volumes and 171 pamphlets have been added to the Library. Only 37 volumes and 5 pamphlets have been acquired by purchase. The remainder are gifts, of which 61 volumes and 156 pamphlets are from the Director, 16 volumes from Professor Goodale, a larger number from Professor Henry J. Bigelow (not counting some duplicates), being relicts of his father's botanical library, and three imperial folio volumes from Mrs. Henry Greenough and her late husband, in memory of their deceased son, Henry Greenough, Jr., who brought the work from Manila. This is the sumptuous illustrated edition of the Padre Blanco's Flora de Filipinas; and the volumes were put into fitting and costly binding by the donors.

The above enumeration does not include sundry Journals, Academical Transactions, Reports, etc., received as continuations or otherwise, which have no direct relation to botany. The additions of botanical specimens to the Herbarium, moreover, are counted only when mounted and ready for incorporation. Several thousand specimens more have been received, examined, selected from, and distributed as duplicates to other herbaria. Of the 8,775 sheets reported as incorporated during the year, which closed on the 1st of September, over 5,000 (holding probably 7,000 specimens) were derived from the rich herbarium of the late George Curling Joad, of Wimbledon, near London, from which at least 3,000 more are still to be selected. For this most valuable collection of the plants of Europe and adjacent parts of Africa and Asia — or rather for such portion of it as we choose to retain — we are indebted to Sir Joseph Hooker, Director of the Royal Gardens at Kew, to which establishment it was bequeathed, and by whom, after certain selections had been made from it for the Kew Herbarium, it was generously made over to this Herbarium for the supply of our needs, the residue to be passed on to the National Museum at Washington. So rich and abundant this collection proves to be, containing as it does the principal published *exsiccata*, and most of the critical or local species of Europe, in authentic and attractive specimens, that, notwithstanding the ample appropriation on our part, the materials which pass from our hands will still well represent the principal part of the European flora. This collection is supplemented by the presentation (in continuation of former gifts) of several hundred plants of Algeria and Tunisia on the part of Dr. Cosson, of Paris, who is engaged upon a Flora of Algeria.

The demands which such foreign collections make upon the time of the Curator, Mr. Sereno Watson, and myself, although very considerable, is small in comparison with that which has to be devoted to the critical examination and naming of the multifarious collections, large or small, which are incessantly poured in upon us from all parts of our own country. A response to these demands cannot be avoided, generally cannot be deferred, in justice to the collectors and donors, and without risk of diverting the streams which, flowing in ever since its establishment, have enriched this Herbarium and rendered it adequate to its leading purpose. But they press so heavily and unceasingly upon the Curator and myself that they greatly retard our progress in the preparation of the works which we have undertaken and which ought to be proceeded with. Nevertheless, two very considerable "Botanical Contributions" have here been made during the past year, one by Mr. Watson, one by myself, and published by the American Academy; and I am now carrying through the press an important portion of the Flora of North America, amounting to fully one-eighth part of this lifelong work.

The growth of the Herbarium has made additional accommodation necessary. To supply this, new cases have been added, at a cost of about two hundred and forty dollars. Also — but since the expiration of the year — the corridor of wood and glass which connected the Herbarium with the Director's residence and study, has been reconstructed in brick with tinned roof and ironed doors, thus gaining a needed apartment and increased security against fire. This alteration has involved an outlay of $341.65.

Five-sixths of the small salary of the Curator for the year past has been defrayed from an appropriation of $1,000, made for this purpose, by the Trustees of the Society for the Promotion of Agriculture. Without this aid, Mr. Watson's invaluable services could have been secured only by the diminution to nearly this extent of our small fund. The continuance of this gift is hoped for.

ASA GRAY, *Director.*

To the President of the University:

Sir, — As Director of the Botanic Garden, I have the honor to present my Report for the year 1882–83.

Last spring, it was found that the drought of the previous year had been disastrous in its effects, our losses of herbaceous perennials in the beds bordering on Raymond and Linnaean Streets being especially heavy. As far as possible, the losses were repaired by setting out young plants, but the dry summer proved very unfavorable. The drought of this year, severer than that of last, was hardly relieved by the few light showers. It was only by a liberal use of water from our hydrants, that the more delicate plants were brought through the season. The large pond became completely dry, and the smaller one fell much lower than ever before. It may here be said, though not coming strictly within the limits of the present Report, that a tubular well has been sunk during this autumn, which yields an abundant supply of good water. It is therefore probable that we shall not suffer again so severely from droughts; at least we shall be less dependent upon the City water-supply. If the amount of water furnished by the new well be as large as is now promised, we can make a freer use of water than heretofore in the cultivation of certain groups of plants. Notwithstanding the drought, all plants and specimens needed for the Biological and Botanical Electives have been promptly furnished. The scarcity of material was felt only during the progress of the Summer Course in Botany.

Owing to the perishable nature of the wood used for the labels in the Garden, it has been found necessary to devote much attention to the work of replacing them by more durable ones. Unlabelled plants are nearly useless for the students who make use of a Botanic Garden ; it is therefore important to secure, even at a high first cost, labels which will remain legible for a term of years. Plainly written or painted labels, of a sort shown by experience to be fairly durable, have been put in the places of the decayed and nearly illegible wooden labels, and it is proposed to adopt the same kind throughout the garden. The work has been done by Mr. L. S. Bailey, Jr. of Michigan Agricultural College.

By extensive repairing, the Greenhouses in the front range have been put in fair condition. The frame-work of the older buildings is so far decayed, that it seemed hardly worth while to endeavor to keep them from falling. It was thought, however, by members of the Garden Committee, whose advice was sought by the Director, that it would be best to make considerable repairs of the wood-work before winter. The two Green-houses in the second range have been furnished with a large Hitching's boiler, and the pipes of both houses are fed from one source. The expenditure for coal has been thereby reduced. Extensive repairs have been also made in the dwelling-houses in the Garden.

The supply of apparatus for demonstration and research, obtained through the liberality of Messrs. H. H. Hunnewell and Frederic L. Ames of the Garden Committee, has been further increased by several invoices. With two exceptions, the shipments of foreign goods have arrived in excellent condition, and have proved satisfactory. In one of the instances just referred to, the loss has been adjusted by the transportation company.

The apparatus for demonstration in Vegetable Physiology has been in use in the lecture-room, since its arrival, and has proved of great utility. There is, however, as yet, no room which is available for experiments requiring much time, for the whole building is open to the botanical classes, and all the table-room is required by undergraduates. During the summer, when one of the greenhouses was temporarily vacated, shelves and tables were fitted for a series of investigations upon the respiration of plants, and several other subjects; but it must be said that this provisional laboratory was too hot at times to be occupied with safety to health. The results of the investigations which were carried on under these serious disadvantages by Dr. George A. Smyth are not yet ready for publication. At the close of summer, it became necessary to refit the greenhouse for the reception of plants, and the dismantled apparatus had then to be brought back and stored in our already crowded rooms.

The timely vote of the Corporation by which Harvard Hall is to be placed at the disposal of the Botanical Department at the end of the current year will afford space for the apparatus for research. At a moderate expense, rooms in Harvard Hall can be made available for botanical laboratories. It is to be hoped that the disadvantage of remoteness from the Botanic Garden, whence must come the supply of material for study, will be more than compensated by proximity to the other College buildings. The lecture-room at the Garden will still be needed for those courses upon Systematic and Economic Botany which require the use of living specimens.

The accessions to the Museum during the year have been large and important. The collection of drugs, dye-stuffs, and fibres has been increased, and all of the specimens liable to be attacked by insects have been placed in glass jars. Many valuable specimens have been added also to the collection illustrating morphology. It is proposed to transfer to Harvard Hall the specimens which are of most use for lectures, retaining at the Garden all the others to form a Museum open to the public.

The following changes have been begun during the year and are now in progress. By rearrangement of the Orders, where this could be done with little outlay, room has been secured for grouping together the living plants which are of medicinal repute, or are useful in the arts; such a collection constitutes the best possible illustration of applied botany. Other places have been taken for groups of plants by which the ordinary and the unusual forms of stems, leaves, etc., can be exhibited. Other beds have been appropriated for Twiners, Climbers, Insectivorous Plants, Monstrosities, and the like.

The plan contemplates the exhibition in our Garden of — 1. The plants which best illustrate vegetable structure and habits; 2. The plants which are used in medicine and the arts; 3. The plants which are needed for purposes of systematic botany, and which cannot be well kept in an herbarium, owing to the changes which they undergo in drying; 4. As full a representation as possible of the herbaceous plants of North America, especially those of Gray's Manual; 5. A selection to illustrate the Natural Orders. It will be seen that these plans do not give room for a display of plants which have an interest merely for the general public. The end which is kept in view is to secure for the students of the University, and for all students in our vicinity, an exhibition of the plants concerning which educated men should know something.

At the close of the year, Mr. William Falconer, who has been mentioned in previous reports as the faithful and efficient head-gardener gave up his position to accept private employment. His successor, Mr. W. A. Manda, has received a thorough horticultural training in Germany, France, and England, and has entered with spirit upon his work.

The Director is happy to report that the income of the Garden has exceeded the expenditures for the past year by more than six hundred dollars. The present funds are therefore sufficient for the running expenses upon the present scale; but they do not justify the replacing of the dilapidated greenhouses by structures worthy of the University. It is to be hoped that friends of the Garden will not long allow our exotic plants to remain in peril. The completion of the subscription, to which reference has been made in the reports for the last two years would enable us to rebuild to advantage.

GEORGE LINCOLN GOODALE, *Director.*

To the President of the University:

Sir, — As Director of the Chemical Laboratory, I have the honor to present the following Report for the Academic year 1882–83: —

During the past year, the courses of instruction in the Laboratory were distributed as follows: The course of elementary lectures on general chemistry to the Freshman class was given by the Director; the course of descriptive chemistry (Chemistry 1, of the elective courses of the College) was, as usual, conducted by Professor Jackson, with the assistance of Dr. Mabery during the practical exercises in the Laboratory; the course on Mineralogy (Chemistry 2) was given by the Director, assisted by Mr. O. W. Huntington; the course on qualitative analysis (Chemistry 3) was given as heretofore by Assistant Professor Hill, with the assistance of Dr. Mabery in the Laboratory work. The course on quantitative analysis (Chemistry 4) was given by Dr. L. P. Kinnicutt, under the supervision of the Director; the course on organic chemistry (Chemistry 5) was given, as in past years, by Professor Hill; the advanced course in mineral chemistry (Chemistry 6) was given by the Director; the advanced students in organic chemistry (Chemistry 9) worked under the special direction of Professor Hill. The several laboratories were under the constant oversight of the assistants; the qualitative laboratory, under that of Dr. Mabery; the quantitative laboratory, of Dr. Kinnicutt; the organic laboratory of Mr. Stevens; and the mineralogical laboratory, of Mr. Huntington.

The total number of students occupying desks at the laboratory was one hundred and seventy-eight, as follows: Seniors 28, Juniors 54, Sophomores 47, Freshman 1, Lawrence Scientific students 8, Graduate students 8, Summer course 35. These students were distributed among the several courses as follows: —

Chemistry 1	68
Chemistry 2	28
Chemistry 3	42
Chemistry 4	18
Chemistry 5	9
Chemistry 6	4
Chemistry 9	1
Graduate courses	8
Summer course	35
	208

Last year was marked by continued activity in the scientific work of the Laboratory.

Most of the results obtained were published under the following titles: —

In the Proceedings of the American Academy of Arts and Sciences, Volumes XVIII. and XIX.

1. On Certain Substances obtained from Turmeric (Second Paper). By C. Loring Jackson and A. C. Menke.
2. On Certain Substituted Acrylic and Propionic Acids. By C. F. Mabery and F. C. Robinson.
3. On the Products of Wood at Low Temperatures. By C. F. Mabery.
4. On the Vapor Density of the Chloride, the Bromide, and the Iodide of Antimony. By C. P. Worcester.
5. On Certain Parabrombenzyl Compounds. By C. Loring Jackson and G. F. Hartshorn.
6. A New Method of preparing Borneol from Camphor. By C. Loring Jackson and A. E. Menke.
7. The Volumetric Determination of Combined Nitrous Acid. By Leonard P. Kinnicutt and J. U. Nef.
8. The Phenyltribrompropionic Acid. By Leonard P. Kinnicutt and George M. Palmer.
9. On the Crystalline Form of Chlordibromacrylic Acid. By Oliver W. Huntington.
10. On Certain Substances obtained from Turmeric (Third Paper). By C. Loring Jackson.

In the American Journal of Science.

11. Possible Variability of the Law of Definite Proportions. By Josiah Parsons Cooke.
12. A Simple Method of correcting the Weight of a Body for the Buoyancy of the Atmosphere when the Volume is unknown. By Josiah Parsons Cooke.

In the Proceedings of the German Chemical Society.

13. On the Substituted Pyromucic Acids. By H. B. Hill.

In the American Chemical Journal.

14. On a Modification of Troack's Process for preparing Carbonic Oxide. By L. P. Kinnicutt.

The eleventh summer course of instruction in Chemistry, given in 1883, under the direction of Dr. Mabery, was attended by thirty-five persons, many of whom were teachers in other colleges or in secondary schools. Courses were given in descriptive chemistry, in qualitative and quantitative analysis and also in organic chemistry. The remarkable success of these summer courses has been due wholly to the exertions of Dr. Mabery, and they have served a very useful purpose in diffusing the methods of practical teaching used in this Laboratory, and in awakening among teachers the spirit of original investigation. The courses are open to students of both sexes, and have from the first attracted many women teachers, who have thus been able to secure the advantages which the University offers for science teaching.

The equipment of the Laboratory has been fully maintained during the past year, although not materially increased. The mineralogical collection has been constantly growing, and at the close of the year was largely increased by the addition of the very valuable collection of meteorites formerly belonging to the late Prof. J. Lawrence' Smith. This collection was purchased by private subscription and presented to the University.

JOSIAH P. COOKE, *Director.*

To the President of the Unviersity:

Sir, — During the past year the subscription of five thousand dollars annually for five years, which was secured in 1878, has expired. To replace it an attempt has been made to raise by subscription the sum of one hundred thousand dollars as a permanent fund. Up to the present time about fifty thousand dollars have been promised for this purpose, the income of which will permit a large amount of useful work to be carried on permanently by the Observatory. This sum will be sufficient to prevent the sudden restriction of scientific operations, which would otherwise have been inevitable on the expiration of the subscription of 1878. It is hoped that additional donations may eventually increase this fund to one hundred thousand dollars, and thus permit the same degree of activity to be maintained as during the past five years.

I give my best thanks to the ladies and gentlemen who by their generous gifts have aided the Observatory at this critical period in its history. Their names, with the amount of the subscription of each, are given below in alphabetical order. Asterisks indicate subscribers to the temporary fund of 1878, as well as to the present permanent fund.

LIST OF SUBSCRIBERS.

NAME.	AMOUNT.	NAME.	AMOUNT.
A Friend	$10,000	* H. H. Hunnewell	$1,000
* W. Amory	2,000	S. Johnson	250
Francis Blake	500	* H. P. Kidder	2,485
* J. I. Bowditch	5,000	A. A. Lawrence	500
* Martin Brimmer	500	A. T. Lyman	500
Shepherd Brooks	500	* T. Lyman	200
T. Q. Browne	500	* W. P. Mason	200
* J. A. Burnham	1,000	* F. H. Peabody	500
* C. F. Choate	500	* O. W. Peabody	250
Wm. Claflin	200	* E. C. Pickering	1,000
Alex. Cochrane	200	H. B. Rogers	1,000
* C. P. Curtis	1,000	* Stephen Salisbury	2,000
J. C. Delano	250	* Mrs. D. Sears	200
W. Endicott, Jr.	2,000	* N. Thayer	5,000
* J. M. Forbes	1,000	* C. E. Ware	500
* Geo. Gardner	100	* Miss Wigglesworth	200
* J. L. Gardner	500	* R. C. Winthrop	250
R. C. Greenleaf	500	R. C. Winthrop, Jr.	100
* Mrs. A. Hemenway	2,000	Mr. and Mrs. J. H. Wolcott	200
* G. Higginson	5,000		

I take this occasion to gratefully acknowledge the aid of the Visiting Committee, to whose efforts both this fund and the subscription of 1878 are due. It is hoped that the results attained will satisfy the friends of the Observatory that this increase in income has been a judicious application of money to scientific purposes. The increase in the number of assistants and of instruments in active use is especially to be noted.

In the present distribution of observatory work, my own observations are chiefly made with the large equatorial and the meridian photometer. Mr. Wendell takes part in the observations with both these instruments, and Professor Searle in those made with the equatorial. Messrs. Cutler and Eaton assist in recording these observations. Their reduction is carried on by Miss Farrar, Mrs. Fleming, and Mr. Cutler, with the aid and partly under the supervision of Mr. Wendell. Their preparation for the press and publication are conducted by Professor Searle and myself. The meridian circle remains in charge of Professor Rogers, who is aided in the observations by Mr. Pratt, and in their reduction also by Mrs. Rogers, Miss Saunders, Miss Bond, Miss Winlock, and Mr. Eaton. The equatorial mounted in the small dome is actively employed by Mr. Chandler, mainly in the observation of variable stars. He is assisted in the reductions by Mr. Metcalf. The time signals are in charge of Mr. Edmands. The meteorological observations and the ordinary business matters of the Observatory are usually conducted by Professor Searle. The computation of cometary orbits is undertaken by Mr. Chandler, and the announcements of astronomical discoveries and results by telegraph or by published circulars are in charge of Mr. Ritchie.

EAST EQUATORIAL.

Eclipses of Jupiter's Satellites. — Photometric observations of these eclipses have been continued upon the system adopted in 1878. In all, two hundred and forty eclipses have now been observed, fifty-five since the end of October, 1882. Some observations were also made last spring to determine the accuracy with which occultations and transits of Jupiter's satellites could be observed. The method heretofore in use has been to observe the times of contact, but these are not easily determined, from the indefinite outlines of the planet and its satellites. The observations just mentioned were made with a double image micrometer. An image of the satellite was placed midway between the two images of Jupiter, and the time of the setting was recorded. Each measure of this kind furnished a determination of the distance between the centres of the planet and satellite, and a large number of measures could be obtained on each occasion instead of a single estimate of contact. The result showed that the time of an occultation or transit could thus be determined with a probable error of about nine seconds, which is less than the probable error in observing an eclipse by the old method.

Revision of Zone Observations. — The stars between 50′ and 60′ north of the equator for the epoch 1860, and occurring either in the zones published in Volume VI. of the annals of this Observatory or in the Durchmusterung, have been twice observed by Professor Searle with the modified wedge photometer described in the last Report. The transit of each star over a bar, and its subsequent disappearance in the wedge were recorded by the chronograph, while its approximate declination was estimated with the aid of three transverse bars 5′ apart. The reduction of these observations is far advanced, and the examination of discrepancies between them and those made under Professor Bond's direction has been begun, for the purpose of detecting any cases of considerable proper motion or variability which may exist in this zone of 10′ in width. Differences amounting in right ascension to $0^s.5$, and in declination to 0′.5, are investigated by more accurate observations when the discrepancy is not explained by an error in reduction. A difference of three quarters of a magnitude in the two separate results obtained with the wedge photometer is also regarded as large enough for special examination. The number of stars which require re-observation does not thus far seem likely to be great. Even a merely negative result with respect to proper motion will have some interest, as it will tend to establish the comparative fixity of the fainter stars, which is at present assumed rather than known. As Professor Bond's zone observations were finished in 1860, the interval between them and the present revision is sufficient to bring into notice any case of annual proper motion much in excess of 1″, either in right ascension or in declination. In the provisional reduction of the photometric portion of the work, the scale of magnitude is made to depend upon the Durchmusterung, but it is expected that the meridian photometer will soon provide the means for a more complete reduction.

Objects having singular Spectra. — The search for these objects has been continued; the regions selected for examination have been chiefly in the Milky Way, but little time has been devoted to this work on account of the use of the large telescope for more important purposes.

Standards of Stellar Magnitude. — In accordance with a plan proposed in the Proceedings of the American Association for the Advancement of Science, xxx. 1, it is intended to form charts of the stars in small areas 4^m in extent in right ascension and 10′ in declination. The centre of each area follows one of a selected series of twenty-four bright equatorial stars at an interval of 4^m, in the same declination. Besides making the charts, it is proposed to determine the magnitudes of a sufficient number of faint stars in each region to exhibit a scale of magnitude to which reference may readily be made by observers who desire their estimates to be directly comparable with those of others.

In obtaining material for the proposed charts, various plans have been tried, with the view of economizing time so far as practicable. Data have been collected for several stars, sufficiently complete to enable the construction of the charts to be undertaken.

Comets.—The present arrangements for the distribution of astronomical intelligence, to be further mentioned below, insure the early receipt at this Observatory of the news of cometary discoveries, so that the first accurate observations of a comet may often be made here. This was the fact with regard to each of the two comets found during the year. The observer was Mr. Wendell. The positions he obtained were extensively employed in the computation of orbits by various astronomers, and preceded by twenty-four hours those obtained elsewhere.

Variable Stars.—The large telescope has been frequently used in observing variable stars, too faint to be visible with the west equatorial, the work of which is mentioned below. The collection of data for charts of the immediate neighborhood of many variable stars has also been undertaken with the large telescope.

Spectra and Color of Stars.—This subject has long been under consideration, in the hope that good means may soon be found of determining the position of the lines and the distribution of the light in different types of stellar spectra. As yet, the observations made have been experimental and preliminary. A large spectroscope was ordered from Hilger, of London, for the purpose of research in this direction, and was received early in 1882. Owing, however, to the difficulty which the maker of the instrument found in understanding, from mere correspondence, the essential objects to be aimed at in its construction, this spectroscope has not proved satisfactory for the proposed work. A more promising form of apparatus is now under consideration.

MERIDIAN CIRCLE.

After an interruption of about a year, the fundamental observations with the meridian circle were resumed on February 8 1883. Before the commencement of the work the level and azimuth of the instrument were brought nearly to zero, by scraping the segmental bearings of the pivots. Between February 8 and November 1, 2383 observations were made of the fundamental stars, 136 of Polaris, and 121 of the Sun, making in all 2640. As heretofore, all the instrumental constants are referred to

Polaris alone. An average of 10.5 independent determinations of the declination of this star have been made at each transit. The actual number of declinations observed is 1420.

The level of the instrument as determined with the Clark reversible level has remained remarkably constant during the year, the entire range of variation having been only $0^s.17$. The individual measures differ on the average by about $0^s.02$ from the adopted mean values.

As formerly, the reversible level has been used to determine the variation of the index error of the circle for the interval during successive transits of the Pole Star. The long collimator has been used for the same purpose during observations near the equinoxes and the solstitial points; but on account of the variation of the fixed point of the collimator during the daytime, and especially on account of the frequent unsteadiness of the image, the results obtained are far less satisfactory than those derived from the level.

A series of observations undertaken for the determination of the longitude of McGill College Observatory, Montreal, extended from June 2 to June 23 inclusive. The plan of the campaign involved an exchange of observers in addition to the determination of personal equation by the usual methods. Accordingly, after three nights at Cambridge and Montreal, Professor Rogers exchanged stations with Professor McLeod. The results for personal equation at each station are as follows: —

MONTREAL.	CAMBRIDGE.
Rogers, *minus* McLeod.	Rogers, *minus* McLeod.
June 13 + $.096^s$.	June 28 + $.143^s$.
June 14 + .111.	June 30 + .144.

The observations at Cambridge were made with the Russian Transit, but simultaneous observations were made with the meridian circle by Mr. Brown. The whole number of observations made during the series is about 400, and their reduction is nearly completed.

After the completion of the reduction to 1875.0 of the zone observations made between 1870 and 1879, it was found by direct comparison with the Durchmusterung positions brought forward to the same epoch, that observations were wanting for 306 stars. It was also found that in many cases, especially between 19 hours and 1 hour of right ascension, the wrong star was observed when there were two or more stars in the same field. During the observations no less than 528 stars were for various causes marked in the observing records as not seen. Since, in a large number of cases, the failure to observe was due to the faintness of the stars under a bright field illumination, it was thought desirable to improve the character of the illumination before commencing the work of re-observation. Accordingly, Mr. George B. Clark, after a series of experiments with a dark field illumination for lines ruled upon glass, arranged a set of mirrors in the tail-piece of the telescope, by which the light, passing from a lamp swinging upon gimbals, through an opening in the tube, is thrown down upon the glass plate in two planes at an angle of about 45°.

When a red-shade glass is interposed, an even illumination is obtained, under which stars of the tenth or eleventh magnitude can be easily seen.

The re-observation of the scattering zone stars was begun October 9, and between this date and November 1, 512 observations were made. The gap which has been filled extends from 19^h 40^m, to 1^h.

The reduction to 1875.0 of the zone observations made between 1870 and 1879 has been completed. The reduction of the observations of fundamental stars for the same interval is also completed. The entire computing force assigned to the Meridian Circle is now engaged in the preparation of copy for publication. This work will be completed in about five weeks.

It will be seen therefore that practically two volumes are ready for publication. The third volume, containing the observations of secondary stars brighter than the magnitude 6.5 and the final catalogues, is in a forward state of preparation.

The final catalogues will depend upon about 46,600 observations, distributed as follows: observations of zone stars, 24,300; of primary stars, 15,200; of secondary stars brighter than the magnitude 6.5, 7,100.

MERIDIAN PHOTOMETER.

The position of this instrument, as a permanent portion of the Observatory work, may now be regarded as fairly established. After a thorough trial it has shown itself capable of determining absolute stellar magnitudes more satisfactorily than any other photometer that we have tried. It bears the same relation to photometry that a transit circle does to measurements of position, and will be regarded as the standard to which all our other measures will be reduced. As it is capable of measuring any star of the ninth magnitude or brighter, its field of work is, for the present, indefinitely great. We are now able to determine satisfactorily the brightness of any such stars when they are desired for any special purpose by other astronomers.

One hundred and thirty-three series, including about twenty thousand sittings, have been made since November 1, 1882, by Mr. Wendell and myself. The most important investigation in progress has been the revision of the Durchmusterung magnitudes. The results of the estimates of brightness made at thirteen observatories, and extending over a period of ten or fifteen years, will thus be brought together and reduced to a single system.

The stars adopted as standards in the Uranometria Argentina, have been observed with this instrument on at least three nights each. The scale has thus been determined in terms of the photometric scale. A comparison has also been made with the measures of the brighter of these stars, obtained with the small meridian photometer. The results with the new instrument are on the average 0.04 magnitudes fainter. This difference is so small that its existence may be regarded as doubtful. No systematic difference depending upon the right ascension is perceptible. On the other hand, a comparison with the Durchmusterung, Uranometria Argentina, and a series of eye estimates, indicate well-marked systematic errors in these catalogues, due to the presence of the Milky Way. In seven and eighteen hours of right ascension the stars are estimated two or three tenths of a magnitude too faint in each of these catalogues. The proximity of bright stars, especially those in Orion, appears a reasonable explanation of this source of error.

Some miscellaneous observations have also been taken, of which the most interesting are those of Neptune, of the comparison stars of *S Cancri*, and of other variables. Observations of Neptune on eleven nights give its light as 7.71 ± .02.

MISCELLANEOUS.

Variable Stars. — The study of the variable stars by Mr. Chandler has been an important part of the Observatory work. The bibliography is nearly completed so far as the first extraction of references is concerned. Notes have been prepared to exhibit the evidence of variability which has been published with regard to about twelve hundred stars. This list excludes many cases in which the evidence is entirely inadequate. A table, giving all the published maxima and minima of each of the variables of long period, is now in process of construction. The preparation of this table has led to the important result that an interval of several years occurs in which no observations appear to have been made of about thirty of these objects. About one hundred and forty stars belong to this class, and since last April all of them have been observed by Mr. Chandler, with the six-inch Clacey Equatorial mounted in the west dome. According to the present plan of work, he observes each of these stars at least twice a month, and more frequently during its brightest phases. Charts of the vicinity of these variables have been prepared, and some progress made towards their completion. Similar charts have been made for about seventy telescopic stars suspected of variability, and nearly two hundred observations of these stars have been obtained. The color of the variable stars is also estimated, about three hundred observations of this class having already been made.

A circular was distributed asking the aid of amateurs and others in the observation of stars known or suspected to be variable. It is believed that by co-operation much valuable material may be collected and much time saved. Numerous replies have been received and important results have been obtained, especially by Mr. H. M. Parkhurst, of New York, and by the Rev. J. Hagen, S. J., of Prairie du Chien, Wisconsin. The great difficulty encountered by most of the observers was that of identifying with certainty the fainter stars, although this is one of the first things that should be learned by any person desiring to do useful astronomical work.

Astronomical Photography. — With the assistance of Mr. W. H. Pickering, Instructor in Physics at the Massachusetts Institute of Technology, an investigation was undertaken in astronomical photography. Two objects were kept in view: first, the determination of the light and color of the brighter stars, and, secondly, the construction of a photographic map of the whole heavens. After numerous preliminary observations, a method was employed by which a photograph of the brighter stars included in about one-twelfth of the entire heavens could be obtained on a single plate.

Maps were also obtained containing a region of about 15° square, containing stars as faint as the eighth magnitude. The color exercised a marked influence on the intensity of the photographic images, in some cases producing a difference equivalent to four magnitudes. It is thought that photography may offer the most delicate test we yet have of the color of a star, — differences too small to be perceptible by the eye becoming distinctly visible in the photographic images.

A circular has been issued to request the donation of specimens of astronomical photography, to be added to those already belonging to this Observatory. Many of the early efforts to render this mode of research available were made by Professors W. C. and G. P. Bond, and the numerous results of their work now preserved here have great historical interest. The photographs of the solar eclipses of 1869 and 1870, taken under the direction of Professor Winlock, form another important portion of the collection. It is hoped that the additional specimens received in response to the circular will permit the formation here of a series fully illustrating the origin and progress of astronomical photography. Many fine examples of the art have already been presented to the Observatory. It is intended hereafter to issue a catalogue of the collection, in which the proper acknowledgment will be made of the liberality of each contributor to it. It will be desirable at the same time to indicate the existence of other important astronomical photographs, and the places where they are preserved. Information of this description will accordingly be gratefully received. Original negatives, or prints on glass from such originals are especially welcome, since they are free from many of the defects of paper prints. Much inconvenience and delay in the reception of these specimens, and of any gifts intended for the Observatory which cannot be sent by mail, may be avoided by forwarding them by a vessel bound for Boston, instead of by one destined for New York.

Time Signals. — The attention of the public has been directed to this department of our work by the introduction of the new system of standard time. The policy of this Observatory, with regard to the change, has been to avoid taking any action tending to force it upon the public against their wishes, but to point out, and so far as possible to avert the difficulties that would arise should two systems of public time remain in general use. An early decision was required, since the railroads centring in Boston made their assent to the change conditional on the adoption of the new time in dropping the Boston time-ball. Action was delayed, however, until the official assent of the city of Boston had been given to the adoption of the new time for striking the hour-bells and for the public clocks. The unanimity and ease with which the community adopted the new time was largely due to the activity of Mr. Edmands, Assistant in Charge of the Time Service.

It is probable that the use of our signals will soon be extended by the introduction of new devices. The Rhode Island Electric Company and the New England Telephone and Telegraph Company are now receiving our signals without charge while they conduct experiments with this view.

The Boston time-ball was dropped on 361 days, — at noon on 321 days by telegraph, and on 40 days by hand. On four days it failed to drop at noon, but was dropped five minutes later, — on three days by telegraph and on one day by hand, — according to the usual arrangement. On December 6, 1882, the ball was dropped at 8 h. 30 m. A.M., and at 4 h. 0 m., P.M., as well as at noon, for the benefit of those desirous of making exact observations of the transit of Venus.

Telegraphic Announcements. — The system of announcing astronomical discoveries employed here for some years past has received an important extension during the last year. An association of over fifty European observatories has been formed, with its headquarters at Kiel, for the purpose of expediting the announcement of astronomical discoveries. The Smithsonian Institution, which had for many years rendered an important service to astronomy by transmitting astronomical telegrams between Europe and America, courteously signified its readiness to transfer this function to the Observatory of Harvard College, upon learning that this Observatory was prepared to undertake it. The change was announced by a circular issued by the Smithsonian Institution on January 10, 1883, and since that time the Observatory has distributed in this country the astronomical intelligence received from the European association, and has forwarded to Kiel information of American discoveries.

The Observatory is fortunate in having secured the assistance of Mr. John Ritchie to take charge of this department of its work.

Both Messrs. Chandler and Ritchie, by whom the present system of telegraphing astronomical announcements was devised and carried into effect, are therefore now included in the corps of the Observatory.

The early transmission by telegraph of observations and computed elements of comets between this observatory and that of Lord Crawford at Dun Echt is continued as in former years. The similar interchange of information with Dr. Oppenheim of Berlin is likewise maintained. The intelligence thus transmitted is distributed in Europe and here by means of special circulars.

Transit of Venus, 1882. — For reasons stated in the last Report, no elaborate preparations were made at this Observatory for observing the transit of Venus on the sixth of last December. But as the weather was favorable during most of the day, a considerable number of observations was obtained. Six telescopes were employed in observing the contacts. With the large equatorial, photometric and spectroscopic observations were also undertaken. The photometric measures furnished the result that the relative light of the Sun and Venus was in the ratio of 100 to 1.6, while the light of the sky surrounding the Sun would be expressed on the same scale by 7.5. This comparative darkness of Venus with respect to the sky was confirmed by direct observation. The spectroscope furnished no evidence of an atmosphere surrounding Venus ; but the dispersion employed was not large.

The diameter of Venus was carefully determined by Professor Rogers and Mr. Chandler, with the results 16″.09 and 16″.35. The method employed was that of transits over inclined lines. An account of all these observations appears in the Proceedings of the American Academy of Arts and Sciences, XVIII. 15.

Almucantar. — An interesting series of observations has been made by Mr. Chandler to test the merits of an instrument devised by him some years ago. It consists essentially of a telescope floating upon mercury, and is designed for the observation of transits over given parallels of altitude. Its name has been derived from this circumstance. This instrument, although having an objective of only 1¾ inches aperture, has given results of a high degree of accuracy, the probable error of a single determination of zenith distance being 0.″5 to 0.″6. Mr. Chandler is now directing the construction of a large instrument of the same kind with a telescope five inches in aperture, and intends to apply it to certain important problems in practical astronomy, for the solution of which it possesses advantages over other astronomical instruments.

While passing last summer in Europe, I visited the observatories at Greenwich, Oxford, Cambridge, Paris, Brussels, Bonn, Strasburg, Berne, Geneva, Milan, Vienna, Berlin, and Potsdam, and the private observatories of Dr. Huggins, of Mr. Common, and of Mr. Ranyard. I was also enabled to present some of the results of work in progress here at meetings of the Royal Astronomical Society at London, the Astronomische Gesellschaft at Vienna, and the Liverpool Astronomical Society. The most important result of my journey was the acquisition of copies of some valuable unpublished manuscripts. By the courtesy of Lady Herschel and of Lieutenant-Colonel John Herschel, I was permitted to examine the original manuscripts of Sir William Herschel's observations of the light of the stars. This led to the discovery of two unpublished catalogues, of which I was allowed to make a copy. The reduction of the four published catalogues by means of our photometric measures has already been mentioned in my last Report. The two additional catalogues furnish means for completing this work, so that we have now a most valuable determination of the light of all the stars in Flamsteed's Catalogue at a time when no other estimates of their light are known to exist. By the kindness of Professor Schönfeld, Director of the Bonn Observatory, I was permitted to make a copy of the unpublished observations of variable stars made by the late Professor Argelander after the publication of Volume VII. of the Bonn Annals. These manuscripts will be very valuable in connection with the bibliography to which reference has already been made.

PUBLICATIONS.

The printing of Volume XIV. of the Observatory Annals has gone on steadily during the year, the printers having constantly been supplied with copy.

The publications named below have appeared since the similar list in the last Report was drawn up, either as official communications from the Observatory, or as papers prepared by its officers individually.

Thirty-seventh Annual Report.

Statement of work done at the Harvard College Observatory during the years 1877–82. By Edward C. Pickering. Cambridge, 1882.

First Circular of Instructions for Observers of Variable Stars, acting in co-operation with the Harvard College Observatory, dated January 27, 1883.

Circulars relative to the Collection and Distribution of Astronomical Intelligence. Cambridge, 1883.

On the Telegraphic Transmission of Astronomical Data. Part ii. The Phrase Code.

Circular on Astronomical Photography, dated February 21, 1883.

Address by Professor Pickering at the June Meeting of the Royal Astronomical Society. The Observatory, vi. 199. Astronomical Register, xxi. 150.

Address by Professor Pickering at the Second Annual General Meeting of the Liverpool Astronomical Society. Abstract of Proceedings, 2. Astronomical Register, xxi. 278.

The Wedge Photometer. By Edward C. Pickering. Proc. Am. Acad. of Arts and Sciences, xvii. 231.

Observations of the Transit of Venus, December 5 and 6, 1882, made at the Harvard College Observatory. Edward C. Pickering, Director. Id. xviii. 15.

On a Method of determining the Index Error of a Meridian Circle at any Instant, depending upon the observed Polar Distance of Polaris. By W. A. Rogers. Id. xviii. 284.

Studies in Metrology. By W. A. Rogers. Id. xviii. 287.

On the Reduction of Different Star Catalogues to a Common System. By W. A. Rogers. Id. xviii. 399; Astronomische Nachrichten, cvi. 257.

A Study of the Centimeter marked "A," prepared by the U. S. Bureau of Weights and Measures for the Committee on Micrometry. By W. A. Rogers. Proc. Am. Soc. of Microscopists, 1883, p. 184.

A Critical Study of the Action of a Diamond in ruling Lines upon Glass and Metals. By W. A. Rogers. Id. p. 149.

Note on Probable Errors. By W. A. Rogers. Id.

Vice-President's Address on the German Survey of the Northern Heavens. By W. A. Rogers. Proc. Am. Assoc. for the Advancement of Science, 1883, p. 53.

Results of Tests with the Almucantar in Time and Latitude. By S. C. Chandler, Jr. Id. (Also Sidereal Messenger, ii. 269.)

Mountain Observatories. By Edward C. Pickering. Appalachia, iii. 99. The Observatory, vi. 287.

On the Orbit of the Great Comet. By S. C. Chandler, Jr. Astronomische Nachrichten, ciii. 347.

On the Orbit of the Great Comet. By S. C. Chandler, Jr. Id. ciii. 381.

Elements of Comet 1882, I. By O. C. Wendell. Id. civ. 287.

Elements and Observations of the Comet 1883, Brooks-Swift. By S. C. Chandler, Jr. Id. cv. 127.

Ephemeris of Comet 1883, Brooks-Swift. By John Ritchie, Jr. Id. cv. 143.

On the Variability of 36 (Uran. Argentina) Ceti. By S. C. Chandler, Jr. Id. cv. 333.

New Planetary Nebulae. By Edward C. Pickering. Id. cv. 335.

Erratum in the Position of a Variable Star. By Edward C. Pickering. Id. cv. 351.

Observations of Comet 1883, I. (Brooks-Swift) at Harvard College Observatory. By S. C. Chandler, Jr. Id. cvi. 9.

A convenient Method of finding or identifying an Asteroid. By O. C. Wendell. Id. cvi. 205.

Date of Discovery by Brooks of Pons' Comet. By John Ritchie, Jr. Id. cvii. 43.

On the Outburst in the Light of the Comet Pons-Brooks, September 21–23. By S. C. Chandler, Jr. Id. cvii. 131.

It is evident that the present rapid accumulation of results will soon involve an important question regarding their publication. The funds especially provided for this purpose will prove entirely inadequate, and the application to this purpose of the unrestricted funds of the Observatory must be considered. This subject will probably be more fully treated in my next Annual Report.

EDWARD C. PICKERING, *Director.*

TO THE PRESIDENT OF THE UNIVERSITY:

SIR, — I have the honor to submit the following report on the condition and progress of the Arnold Arboretum during the year ending August 31, 1883: —

The negotiations between the College and the city of Boston for their joint occupancy of the Arboretum as a public park were concluded on the 30th day of December. On that day an Indenture (see Appendix), signed by the President of the University, and the Park Commissioners of Boston, was executed. Under this indenture the city agreed to lease to the College for 999 years, with the right of renewal, at a nominal rent, the portion of the original Arboretum grounds not needed for parkways and roads, the Park Commissioners having previously laid out the Arboretum as a public park. Nearly twenty acres of ground adjoining the College property and purchased by the city of Boston for the purpose were included in the lease, which is made contingent upon the fulfilment of various conditions by the two parties.

It is believed that this arrangement will be of great mutual benefit to the Arboretum and the city of Boston. Under its provisions the property of the College in the Arboretum is freed from all danger of taxation, and is relieved of the possibility of encroachment by any railroad, tramway, or public street.

The city binds itself to expend within a reasonable time the sum of $75,000 in building roadways through the Arboretum upon a plan previously agreed upon. It agrees, further, to maintain these roadways in a proper manner during the term of the lease, and to protect them and the Arboretum itself from injury by a suitable police.

The College agrees that the Arboretum shall be open for the instruction and use of the public at all reasonable hours. The control and arrangement of the Arboretum, with the exception of the roadways, rests in the hands of the President and Fellows. The scientific development of the Arboretum, therefore, will not be affected by this arrangement, while its usefulness as a means for popular instruction must be greatly increased.

Under this agreement, the construction of the roads was begun by the city early in July, and has been steadily continued.

The great accumulation of plants in the nurseries has necessitated their further enlargement, and nearly two acres have been added to the nursery grounds. Such plants as required moving have been transplanted, and the large collections of plants are in a satisfactory and flourishing condition.

In my last Report I called attention to the new system introduced into the Arboretum for preserving by means of a card catalogue a record of the collection of living plants. The plan has been found to work satisfactorily, and the whole nursery collection has been renumbered and relabelled during the year, to conform to it. The collection is now represented by 2,542 cards.

The interchange of plants and seeds with other botanical and horticultural establishments has been continued during the year. There have been 7,841 plants (including cuttings and grafts) and 21 packets of seeds distributed as follows: to all parts of the United States, 6,431 plants and 1 packet of seeds; to Great Britain, 24 plants and 5 packets of seeds; to the Continent of Europe, 262 plants and 15 packets of seeds; to Algeria, 100 plants.

There have been received during the year, 7,821 plants (including cuttings and grafts) and 98 packets of seeds, from 22 donors.

HERBARIUM AND MUSEUM.

The ordinary work of the Herbarium and Museum has been continued during the year. There have been added to the Herbarium, 3,827 sheets of dried plants; of these, 927 sheets contain North American species, and 2,900 sheets a collection of the ligneous plants cultivated in Europe and prepared at the Royal Garden, Kew, for the Arboretum.

During the year, the Report upon the Forests of the United States, prepared by the Director, in connection with the 10th Census, has been completed. The botanical drawings of the trees of North America for the Government of the United States, have been continued by Mr. Faxon, who has also been engaged in the arrangement of a special herbarium, illustrating North American trees, to accompany the exhibit of forest products which Mr. Morris K. Jesup is now forming in New York, under my general direction, in connection with the American Museum of Natural History.

As a member of the Northern Transcontinental Survey, the Director devoted the months of July and August to an examination of the composition and distribution of the forests of the Rocky Mountains in Northern Montana.

C. S. SARGENT, *Director.*

To the President and Fellows of Harvard College:

I have the pleasure of reporting that during the past year the latest addition to the Museum building has been completed. The transfer of the students to their new quarters has been effected, and the whole building is now occupied as originally planned. The rooms in this addition are devoted mainly to Laboratories, to the Library, Lecture Room, and Curator's Room, only such space being reserved for exhibition as was necessary to connect the general exhibition rooms with those of the main body of the building, hereafter to be erected.

Ten years wanting only a few weeks have passed since the care of the Museum devolved upon me. Some account is due here of the work done during that decade, and of the present state of the Museum as compared with its condition at the close of 1873. At that time, and indeed far earlier, from the very beginning of the institution, the general plan was sketched out in the mind of its founder. But the difficulties involved in the initiation of so large an undertaking prevented Professor Agassiz from developing his schemes. From want of rooms and of means for proper distribution, the immense accessions constantly accumulating upon his hands invaded, little by little, the space devoted to special objects. It became evident, at the time of his death, that nothing short of a radical rearrangement of the collections could bring out his plans and give them distinct expression. This rearrangement has been completed only within the past year, and no sign of the former confusion, due to a too rapid accumulation of material, is left.

At the close of 1873 the Museum building covered about 9,400 square feet of ground, and was filled to overflowing, from attic to basement, with the collections brought together by its first Director. The buildings and collections then represented an expenditure of about $200,000. From that time to the past Academic year the new buildings and collections represent an additional expenditure of more than $500,000, in addition to the current expenditure. The ground covered by the additional building measures about 9,500 square feet. The resources at the disposal of the Director in 1873 came from the income of invested funds amounting to about $185,000. At the present moment, these amount to over $580,000. Ten years ago our departmental Library numbered some 5,000 volumes. Since that time it has increased to 16,000 volumes.

The temporary quarters provided for the instruction then given at the Museum afforded no facilities for the more accurate work now required in many branches of the Biological and Geological Departments. Although our present laboratories, still in their first year of service, are not equipped as I hope to see them, they afford even now ample facilities for instruction and investigation, as compared with those heretofore available at Cambridge.

The publications of the Museum, giving the results of investigations by specialists or by Assistants of the Museum, the materials for which have been drawn from our collections, have been rapidly issued. Volumes IV. to X. of the Bulletins, and Volumes IV. to IX. of the Memoirs, have been published during the last ten years.

Already, in 1853, the late Edward Forbes saw the importance of geographical displays as applied to the geological structure and products of the colonies of Great Britain, in connection with the Jermyn Street Museum of Practical Geology. He protested against the simple and single systematic arrangement, as not covering the ground necessary to make the Museum practically useful. He further dwelt on the fact, that a museum as such, not connected with an educational institution, was of very little use to the public beyond its value as a cyclopædia of reference.

We have attempted to build up an institution of that kind, and under our present conditions it is now possible to form some idea of the success of the Museum of Comparative Zoölogy, based as it is upon a plan essentially different from that of other like institutions. Our Exhibition Rooms, for instance, are comparatively small, each one devoted to a special subject, but so combined that, when taken together, they illustrate the animal kingdom as a whole in its general relations, and in its geographical and palæontological range and distribution. They are intended not only to meet the wants of the public at large, and of beginners as well as of more advanced university students, but also to promote research by giving assistance to specialists and original investigators. Meanwhile, the work of the Museum proper should be in charge of Assistants whose duties are so arranged as to leave a good part of their time free for original research; the Museum as a whole forming an important branch of the Natural History Department of the University, with which its Assistants and Professors are intimately connected.

An enumeration of the contents and uses to which our space is devoted will give a better idea of our aims than a lengthy description.

EXHIBITION ROOMS.

Synoptic Room: —
  Synopsis of the Animal Kingdom, living and fossil.
Five Systematic Rooms: —
  Mammalia.
  Birds.
  Fishes.
  Mollusca.
  Radiates and Protozoa.

And their Galleries for the Systematic Collections of Reptiles, Insects, and Crustacea.

Seven Faunal Rooms and Galleries: —
  North American.
  South American.
  African, including Madagascar.
  Indian.
  Australian.
  * Europeo-Siberian.
  * Atlantic.
  * Pacific.

Four Rooms for the Palæontological Collections.

Two Rooms for the Palæozoic, one for the Mesozoic, and one for the Tertiary: —
  * The Silurian and Devonian.
  * The Carboniferous and Jura.
  * The Cretaceous.
  * The Tertiary.

The Work Rooms for the Assistants of the Museum, and the Storage Rooms, which are also intended as work rooms of their special subjects, are distributed as follows, in addition to a large Receiving Room and a general workshop.

The Alcoholic Collections stored in the basement occupy: —
  Four Rooms devoted to Fishes.
  Two Rooms for Fishes and Reptiles.

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* Not yet opened to the public.

One Room for Birds and Mammals.
One Room for Mollusca.
One Room for Crustacea.
One Room for the other Invertebrates.

The Entomological Department is to occupy eventually four gallery rooms of the first story.

The Work Rooms and Storage Rooms of the fifth story are filled by collections occupying:—

Five Rooms devoted to Birds and Mammals; three for skins and eggs, and two for skeletons.
One Room for Crustacea.
One Room for Mollusca.
One Room for Fish and Reptile Skeletons.
One Room for the Collection of dry Invertebrates (Corals, Echinoderms, Sponges, etc.).
Two Rooms for Fossil Vertebrates exclusive of Fishes.

The remaining Palæontological Collections are crowded into four Work and Storage Rooms.

Two Work Rooms for the Geological and Lithological Department.

Four Rooms are devoted to the Library of the Museum, and one Room for the office of the Curator.

There are also:—

A large general Lecture Room.
Three Laboratories for Students in Biology.
Three Laboratories for Students in Geology and Palæontology, with two smaller private rooms for the Instructors.

With the Biological Laboratories will be connected also a large Room for an Aquarium for both fresh-water and marine animals, and another room for a Vivarium, both of which are in the basement of the building.

This will give us, in all, seventeen rooms devoted to the exhibition of collections for the public; ten work and storage rooms in the basement, for the Alcoholic Collections; thirteen work and storage rooms for the dry Zoölogical Collections; eight similar rooms for the Palæontological and Geological Collections; and thirteen rooms devoted to the Laboratories, Lecture Rooms, and Library connected with the instruction given at the Museum. The arrangement being such that whenever any Departments, as, for instance, the Geological and Geographical, or the Anatomical, or any other, outgrow their present quarters, room can be made for them, by extensions of the building, for a long time to come, without interfering with the plans which have been carried out thus far.

In adopting a small unit for the size of our rooms (30 × 40 ft.), we deliberately abandoned all attempts at Exhibition Rooms imposing from their size. We have aimed only to place before the public such portions of our collections as shall become instructive; and in our storage and work rooms the appliances for storage aim at economy of space, and are intended, while they do not neglect the careful preservation of the Collections, to give to the Assistants and students the freest and quickest possible access to them.

During the past summer the following persons pursued their studies at my Newport laboratory: — Mr. Fewkes, one of the Museum Assistants, who devoted his time principally to embryological studies of Annelids, Messrs. Barnes and Tuttle of the Scientific School, and Miss E. A. Nunn, who devoted her time to the study of the earlier stages in the development of Brachyura. Prof. C. O. Whitman took up the study of the early stages of some of the many species of pelagic fish-eggs, so common at Newport; and he is preparing in connection with me a preliminary report on his work, some of which is in continuation of investigations on the early stages of the bony fishes, begun nearly twenty years ago.

The course in Biology, given by Professors Farlow and Faxon, was attended by two Seniors, seventeen Juniors, four Sophomores, and one special student. Mr. G. W. Perkins assisted Professors Farlow and Faxon in the laboratory work of the course.

In Advanced Zoölogy, the course of Professor Faxon was followed throughout the year by thirteen Seniors, four Juniors, and one student from the Scientific School.

During the past Academic year lectures in General Zoölogy were given by Dr. Mark to 104 students, of whom 39 were Seniors, 34 Juniors, 25 Sophomores, 2 Freshmen, 2 Unmatriculated, and 2 Scientific Students.

In Dr. Mark's course on Embryology, the lectures were attended by three fourth-year students of the Lawrence Scientific School. The laboratory work was pursued by the three students attending the lectures, and by another who had previously attended the same course. The work consisted largely in the investigation of special topics proposed by the instructor at the beginning of the year.

These studies have resulted in the production of the following papers: —

1. On the Development of Œcanthus niveus, and its Parasite, Teleas. By Howard Ayers. Mem. Bost. Soc. Nat. Hist., Vol. III. No. 8.

2. On the Development of the Posterior Fissure of the Spinal Cord, and the Reduction of the Central Canal, in the Pig. By William Barnes.

3. Notes on the Development of Phryganidæ. By William Patten.

4. The Relation of the External Meatus, Tympanum, and Eustachian Tube to the First Visceral Cleft. By Albert H. Tuttle, of Boston.

The papers of Messrs. Barnes and Tuttle are in press in the Proceedings of the American Academy of Arts and Sciences.

Professor Shaler and Mr. W. M. Davis gave the usual courses, as follows: —

In Physical Geography, attended by sixty students. (Mr. Davis.)

In Elementary Geology, with field-work, attended by one hundred and eighty-five students. (Prof. Shaler and Mr. Davis.)

A course in Advanced Geology, with field work, attended by twenty-five students. (Prof. Shaler and Mr. Davis.)

A course in Palæontology, attended by seven persons. (Prof. Shaler.)

Professor Whitney lectured twice a week on Applied Geology, throughout the year. He was assisted in this course by Dr. Wadsworth, who also gave a course of lectures on Advanced Lithology, and took charge of the instruction of a small class of special students in Microscopic Lithology.

About five hundred volumes have been added to the Library of the Museum during the past year.

A special list of the Museum publications during the last Academic year is given in Appendix A of this Report. They consist of four numbers of the Memoirs, and of fifteen numbers of the Bulletin. The publications issued elsewhere by several specialists, based mainly upon Museum materials, are mentioned in the special Reports of the Assistants of the Museum. The other publications of the Professors and Assistants of the Museum are noted in the Reports of the different Departments.

The larger number of the publications of the Museum are devoted to Reports on the collections made by the "Blake." These consist of: —

A Report on the Stalked Crinoids collected by the "Blake" in the Caribbean, by Mr. P. H. Carpenter. Bull. M. C. Z., X., No. 4. 16 pp. December, 1882.

A Preliminary Report on the Fishes of the "Blake," collected during the Summer of 1880, along the Atlantic Coast of the United States, by Prof. B. G. Goode and Dr. Tarlton H. Bean. Bull. M. C. Z., X., No. 5. 37 pp. April, 1883.

A Report on the Ophiuridæ of the "Blake," by Theodore Lyman. Bull. M. C. Z., X., No. 6. 50 pp. 8 plates. May, 1883.

A Preliminary Report on the Anthozoa, by Prof. A. E. Verrill. Bull. M. C. Z., XI., No. 1. 72 pp. 8 plates. July, 1883.

A Report on the Isopods, by Oscar Harger. Bull. M. C. Z., XI., No. 4. 14 pp. 4 plates. September, 1883.

In connection with the explorations of the Gulf Stream by the Coast Survey, a Report on the Medusæ of the Bermudas, by J. Walter Fewkes. 10 pp. 1 plate.

Vol. X. No. 3 of the Bulletin contains a paper by Dr. Harrison Allen on the Ethmoid Bone in the Mammalia. 27 pp. 7 plates. November, 1882.

Of the seventh volume, the first of the Geological Series, three numbers have been published: —

No. 8, a short paper by Prof. Lesquereux, On some Permian Fossil Plants from Colorado. 4 pp. October, 1882.

Nos. 9 and 10, by Mr. W. M. Davis: On the Triassic Traps and Sandstones of the Eastern United States. 59 pp. 3 plates. On the Lower Helderberg Limestones east of the Catskills. 20 pp. 2 plates. January, 1883.

Professor Whitney has published the third and concluding part of the Climatic Changes, Vol. VII. No. 2, Part III. Mem. M. C. Z., pp. 265-394. October, 1882.

I have myself published the following: —

A short paper entitled, A Chapter in the History of the Gulf Stream. Bull. M. C. Z., XI., No. 2. 5 pp.

The First Part of a Memoir on the Porpitidæ and Velellidæ of the Gulf Stream. Mem. M. C. Z., Vol. VIII. No. 2. 16 pp. 12 plates.

Selections from Embryological Monographs, containing the Echinodermata. Vol. IX. No. 2, Mem. M. C. Z. 45 pp. 10 plates. July, 1882.

The First Part of the Report on the Echini of the "Blake." Vol. X. No. 1, Mem. M. C. Z. 126 pp. 32 plates. September, 1883.

I have in addition published in the Memoirs of the American Academy, June, 1883, Vol. X., a paper on the Tortugas and the Florida Reefs, 27 pp., 8 maps, 4 plates, from observations made while on the "Blake," and while engaged in studying the surface fauna of the Gulf Stream under the auspices of the Coast Survey.

The last volume of the Transactions of the Royal Society of London, contains a memoir by the late Prof. F. M. Balfour and Mr. W. N. Parker, on the structure and development of Lepidosteus, based upon material sent them from the Museum.

Some progress has been made in the arrangement of the Exhibition Rooms. The Indian, the African, and the Australian faunal collections are now accessible to the public, although they yet are far from complete. The Systematic Collection of Birds has undergone a final arrangement, and the storage rooms devoted to the Radiates, the collections of fish and reptile skeletons, and the Crustacea, are now filled with their respective collections.

Mr. Garman has continued the explorations made by him in previous years in the West, and he and his assistants have sent us valuable additions to our collections of Mammalian and Reptilian fossil remains. We have specially to thank the Secretary of War, the Hon. R. T. Lincoln, and the Secretary of the Interior, the Hon. H. M. Teller, for the letters of introduction they kindly sent for the use of Mr. Garman while in the Territories.

The principal collections purchased were received from Prof. H. A. Ward of Rochester, and Mr. E. Häberlein, who sent us a second collection of Solenhofen fossils. An extensive collection of fossil fishes for the Lower Carboniferous, brought together by Mr. Thomas Stock of Edinburgh, has also been purchased for the Museum.

I hope during the coming winter to be able to move the collections of fossils now stored in the attic to their final storage rooms, and to make a beginning in the arrangement of the Palæontological Collections intended for exhibition.

ALEXANDER AGASSIZ, *Curator.*

CAMBRIDGE, October 1, 1883.

APPENDIX.

I.

Indenture between Harvard College and the City of Boston concerning the use of the Arnold Arboretum as a Public Park.

THIS Indenture made the thirtieth day of December, in the year eighteen hundred and eighty-two, between the City of Boston, a Municipal Corporation in the Commonwealth of Massachusetts (hereinafter called the City), of the one part and the President and Fellows of Harvard College, a corporation established by the laws of Massachusetts (hereinafter called the College), of the other part.

Whereas, the Board of Park Commissioners of the City of Boston, by virtue of the authority conferred upon said Board by Chapter one hundred and eighty-five of the Acts of the Legislature of Massachusetts of the year 1875, and by the City Council of said City of Boston, by a certain written instrument of even date herewith to be recorded with the Suffolk Registry of Deeds, have taken and located as and for a public park that tract of land in that part of said city known as West Roxbury held by the College and by it dedicated to the use of the Arnold Arboretum, so called, together with certain adjoining tracts the property of other persons deemed by said Commissioners convenient and necessary for use in connection therewith, for the purposes and under the powers and limitations set forth in said Act and Acts in addition thereto and amendment thereof.

And whereas, by an act of the General Court of Massachusetts passed on the twenty-ninth day of March, in the year 1880, it was enacted that in case the said Board of Park Commissioners deemed it desirable so to take the said lands for the said purposes, the City was thereby authorized to lease such portions of the said Arboretum and adjoining tracts so taken, as the said Board of Commissioners might deem not necessary for use as park ways and grounds to the College, to be held to the same uses and purposes as the said Arboretum was then held under the trusts created by the wills of Benjamin Bussey and of James Arnold, and for such a term and upon such mutual restrictions, reservations, covenants, and conditions as to the use thereof by the public in connection with the uses of the same under the said trusts, and as to the rights, duties and obligations of the contracting parties as might be agreed upon between the said Commissioners and the College. And the Board of Park Commissioners on the part of the City and the president on behalf of the College were respectively authorized to execute and deliver the said lease.

And whereas, the said Board of Park Commissioners deems such portion of the said Arboretum and adjoining tracts as is hereinafter described and leased to be not necessary for use as park ways and grounds and considers that the same will be better and more advantageously enjoyed and used by the public as a part of the said park if the same be leased to the College for the purposes of the said trusts and upon such terms and subject to such provisions with regard to the use thereof by the public as are hereinafter contained. And it has been agreed between the said Commissioners and the College that the same be leased to the College for the term and upon the mutual restrictions, reservations, covenants, and conditions hereinafter expressed.

Now this Indenture witnesseth that the City by virtue and in exercise of the power and authority given to it by the said act and of every other power and authority it hereto enabling doth demise and lease unto the College all that parcel of land delineated on a plan entitled "The Arnold Arboretum," and to be recorded herewith in the Suffolk Registry of Deeds situate in that part of Boston known as West Roxbury and bounded and described as follows: — Beginning at a point on the northerly line of South Street at land of the President and Fellows of Harvard College, and running thence northwesterly on said land by two lines 259 feet and $282\frac{94}{100}$ feet; thence turning and running in a general westerly direction on said land of said President and Fellows by several lines $457\frac{14}{100}$ feet, $343\frac{59}{100}$ feet, $60\frac{16}{100}$ feet, $145\frac{20}{100}$ feet, $140\frac{20}{100}$ feet, $202\frac{1}{100}$ feet, and $464\frac{92}{100}$ feet, thence turning and running on said last mentioned land in a general southeasterly direction by several lines $83\frac{29}{100}$ feet, $116\frac{71}{100}$ feet, $107\frac{80}{100}$ feet, and $254\frac{87}{100}$ feet to South Street, thence turning and running southwesterly by a curved and broken line on said South Street $1408\frac{87}{100}$ feet to Bussey Street, thence turning and running northwesterly on said Bussey Street $1981\frac{57}{100}$ feet to Walter Street, thence turning and running northerly on said Walter Street $240\frac{37}{100}$ feet, thence turning and running northeasterly by three lines on land of Caroline E. Skinner and Freelove S. Kent, $272\frac{64}{100}$ feet, $357\frac{17}{100}$ feet, and $242\frac{94}{100}$ feet; thence turning and running northwesterly on said land of Kent $350\frac{80}{100}$ feet to Centre Street, thence turning and running northeasterly on said Centre Street $1409\frac{97}{100}$ feet, thence turning and running southeasterly 200 feet, thence northeasterly 100 feet, thence easterly $369\frac{56}{100}$ feet, thence northeasterly $200\frac{8}{10}$ feet, thence northwesterly $493\frac{29}{100}$ feet, thence northeasterly $755\frac{75}{100}$ feet, thence northwesterly 130 feet, the last seven boundaries being on land of The Adams Nervine Asylum, thence turning and running northeasterly on land of said Asylum, and on lands now or formerly of Edward K. Butler, William H. Goodwin, George W. Richards, and William Minot, Jr., Trustee, $1020\frac{26}{100}$ feet to Centre Street, thence turning and running southeasterly on said Centre Street $126\frac{63}{100}$ feet, thence turning and running southwesterly by a curved line of $28\frac{58}{100}$ feet radius 45 feet, thence southerly by another curved line of $157\frac{85}{100}$ feet radius $68\frac{89}{100}$ feet, thence by another curved line $322\frac{59}{100}$ feet radius $97\frac{63}{100}$ feet, thence southeasterly by a straight line $94\frac{20}{100}$ feet, thence southerly by a curved line of $1011\frac{61}{100}$ feet radius $490\frac{14}{100}$ feet, thence southwesterly by another curved line of $747\frac{89}{100}$ feet radius $307\frac{65}{100}$ feet, the last six boundaries being on land of George W. Goldsmith and his heirs; thence southwesterly by a straight line on land now or formerly of Robert and Fred Seaver $217\frac{80}{100}$ feet, thence southwesterly by a straight line $1\frac{8}{10}$ feet, thence southerly by a curved line of $354\frac{60}{100}$ feet radius $427\frac{43}{100}$ feet, thence southeasterly by a straight line $218\frac{64}{100}$ feet, the last three boundaries being on land of Sophia A. Smith and her heirs, thence continuing on the same line southeasterly $524\frac{27}{100}$ feet, thence by a curved line of $387\frac{84}{100}$ feet radius $172\frac{85}{100}$ feet, thence southeasterly by a straight line 50 feet, thence by a curved line of $859\frac{92}{100}$ feet radius $435\frac{25}{100}$ feet, thence southeasterly by a straight line $60\frac{15}{100}$ feet, thence by a curved line of $529\frac{69}{100}$ feet radius $41\frac{59}{100}$ feet, thence by another curved line of 175 feet radius $45\frac{80}{100}$ feet, thence easterly by another curved line of $17\frac{73}{100}$ feet radius $35\frac{94}{100}$ feet, to South Street; the last eight boundaries being on land of Arthur W. Austin, thence turning and running southerly and southwesterly on South Street $422\frac{80}{100}$ feet, to the point of beginning containing $167\frac{44}{100}$ acres more or less.

Excepting and always reserving out of these presents all those parts of said lands delineated and marked on said plan as driveways and parkways, and those parts of the same lands delineated and marked A. and B. respectively on the said plan.

And granting with the premises hereby leased a free and unobstructed right of way upon and over all the said excepted parts of the said lands and upon and over the driveways and parkways delineated on the said plan, and so marked thereon.

To have and to hold the premises hereby leased (hereinafter called the Arnold Arboretum) unto the College and its successors and assigns for the term of One Thousand Years from the date hereof without impeachment of waste upon and for the same trusts, uses and purposes as those upon and for which the said land held by the College for the purposes of the said Arboretum at the said time of the passing of the said act of the year 1880, was then held under the will of Benjamin Bussey and the will of James Arnold and a certain indenture dated the 29th day of March in the year 1872, and made between George B. Emerson, John J. Dixwell and Francis E. Parker, as trustees of the will of the said James Arnold of the one part, and the College of the other part, in which indenture the trusts provided for in the said will of James Arnold are declared in pursuance of the directions in the said will contained, yielding and paying therefor during the said term the yearly rent of one dollar.

And the City covenants with the College, its successors and assigns that the College and its successors and assigns shall peaceably hold and enjoy the premises hereby leased during the said term without any interference or control of the City or any person claiming through or under it. That the City will at all times save and keep harmless and indemnified the College and its successors and assigns, and keep the premises hereby leased free and discharged of and from all taxes and assessments of every description which during the said term may be assessed or payable in respect of or charged upon the premises hereby leased or any part thereof.

That the City will within a reasonable time make and finish fit for use of good sound materials and in a proper and workmanlike manner the driveways of which the sites and dimensions are delineated on the said plan and so marked thereon; but at a cost not exceeding seventy-five thousand dollars, and that the said driveways during the said term shall be repaired and maintained in a proper and substantial manner free of all charge and expense to the College and its successors and assigns. That the City will during the said term provide and maintain a proper and sufficient police in and about the Arboretum and the said parts excepted from these presents and the said roads, avenues, and parkway for the preservation of order and good conduct and the observance of the rules hereinafter mentioned or provided for. That no public street or highway and no steam or horse railway, or construction for like purposes shall be laid out through or over any part of the Arnold Arboretum except in such places if any and in such manner as the Park Commissioners and the College shall approve. That if the water supply from the sources within the Arnold Arboretum which the College has heretofore enjoyed for use in the said Arboretum shall at any time be cut off, interrupted, or impaired by the City or its assigns the City will immediately provide at its own charge and expense an equal or superior supply of water for the like uses. And that if the College, its successors or assigns shall be desirous of taking a renewed lease of the said premises for the further term of one thousand years from the expiration of the term hereby granted, the City or its assigns will upon the request and at the expense of the College, its successors or assigns and upon its or their executing and delivering to the City or its assigns a counterpart thereof, forthwith execute and deliver to the College its successors, or assigns a renewed lease of the said premises for the further term of one thousand years at the same yearly rent and upon and subject to the same restrictions, reservations, covenants, and conditions as are herein contained including the present covenant and so on from time to time forever. And the College for itself and its successors and assigns covenants with the City that the College will not commence or prosecute any action, suit or other proceeding against the City for the enforcement or recovery of any damages or claim which the College may have or be entitled to against the City by reason of the said taking of the said Arboretum land by the City. And that the Arnold Arboretum shall at all reasonable times be open to the inspection of the public as a part of the said Park subject to the rules hereinafter mentioned or provided for. *Provided* always and it is hereby declared that the City shall be at liberty to erect and maintain suitable gateways for entrance thereto upon any of the said excepted parts and to maintain gates there. And that no pavilion, kiosk, urinal, museum, greenhouse, stable, shed or other building (except as above provided) shall be erected or maintained within the Arnold Arboretum, or in any of the said excepted parts or in any of the said driveways or parkways without the prior consent of the Park Commissioners and the College. *Provided* also and it is hereby declared and agreed that the use of the Arnold Arboretum and of the said excepted parts and of the said roads, avenues, and parkways by the City and its assigns and the College its successors and assigns and the public, shall be subject to the rules contained in the schedule hereto annexed and to such additional rules as have been or may from time to time be agreed upon between the Park Commissioners and the College. But any of the said rules may be altered or annulled by agreement between the Park Commissioners and the College.

In witness whereof the City by its Board of Park Commissioners and the College by its President have hereto set their respective corporate seals, and caused these presents to be signed acknowledged and delivered in their name and behalf by the said Commissioners and the said President the day and year first above written.

Seal of the City of Boston.

The City of Boston by
CHAS. H. DALTON,
WM. GRAY, JR.,
HENRY LEE,
The Board of Park Commissioners of the City of Boston.

Seal of Harvard College.

President and Fellows of Harvard College, by
CHARLES W. ELIOT,
President.

COMMONWEALTH OF MASSACHUSETTS.

Suffolk, S.S., December 30, 1882. Then personally appeared Charles H. Dalton, William Gray, Jr., and Henry Lee, Board of Park Commissioners of the City of Boston, and acknowledged the foregoing instrument to be the free act and deed of the said City, and personally appeared Charles W. Eliot, President, and acknowledged the foregoing instrument to be the free act and deed of the President and Fellows of Harvard College before me

EDWARD P. NETTLETON,
Justice of the Peace

The Schedule referred to in the above written Indenture.

RULES.

1. The Arnold Arboretum shall be open to visitors daily from 7 o'clock A.M. until sunset.

2. No hawker, peddler, or huckster or other person offering or exposing for sale any goods or wares shall be allowed in the Arboretum or in any of the roads, avenues, or parkways within its limits.

3. No military or civil encampment, parade, drill, review, procession, or other military or civil evolution, assemblage, entertainment, exercise or athletic game, or sport shall be had or performed within the Arboretum or in any of the said roads, avenues, or parkways except with the prior consent of the Park Commissioners and the Corporation of Harvard College. And no military body shall, except with such prior consent, enter or move in military order within the Arboretum, or in any of the said roads, avenues or parkways, except in case of riot, insurrection, rebellion, or war.

Duplicate has been recorded, with plan, in Suffolk Deeds, Lib. 1584, folio 502.

II.

SUMMARY OF STUDENTS IN THE UNIVERSITY AT THE BEGINNING OF THE ACADEMIC YEAR, 1882-1883.

College,		
Seniors	203	
Juniors	209	
Sophomores	207	
Freshmen	263	
		882
Unmatriculated Students		46
Lawrence Scientific School		25
Bussey Institution		7
Dental School		25
Medical School		229
Law School		131
Divinity School		27
Candidates for the degrees of A.M., Ph.D., and S.D.		48
Holders of Fellowships		8
Resident Graduates not Candidates for a Degree		4
		1432

Persons who attended the Summer Courses in Science in 1883.

Chemistry	35
Botany	5
	40

Number of Certificates issued to Women in 1883.

Advanced Examination (Old Method)	1
Final Examination (New Method)	8
	9

III.

ACADEMIC HONORS FOR THE YEAR 1882-1883.

Commencement, June 27, 1883.

Orations.

John Hubbard Wilkins Edgerly,
Everett Wyman Sawyer,
Herbert Marshall Lloyd,
Robert Emmet O'Callaghan,
Charles Joseph Hubbard,
Arthur Richmond Marsh,
Edwin Guthrie McInnes,
Archibald Livingstone Hodges,
Charles Hall Grandgent.

Dissertations.

Walter Elijah Damon,
Walter Lincoln Burrage,
Patrick Michael Keating,
George Henry Heilbron,
Franklin Henry Hooper,
Luther Atwood,
Chokichi Kikkawa,
Arthur Lyman,
Samuel Norris,
George Ross Hewitt,
Benjamin Blake Holmes,
Arthur Henry Woodbury,
Henry Barton Jacobs,
Thomas Washington Cowgill,
James Merrill Burch,
Stephen Herrick Knight,
George Emerson Lowell,
Charles Pomeroy Worcester,
Henry Lloyd Smyth,
John Henry Wigmore,
Louis Arthur Coolidge,
William Hussey Page,
James Newton Garratt,
Herbert Putnam,
Frank Warton Kaan,
Sumner Bass Pearmain,
Horace Binney,
Alfred Church Lane,
Joseph Randolph Coolidge,
Arthur Clark Denniston,
William Faxon,
George William Evans,
Albert Cameron Burrage,
Morris Loeb,
Francis Britain Fay,
Alphonso Adelbert Wyman,
Joseph Henry Sheffield,
Thomas Cogswell Bachelder,
Fletcher Ranney,
Mellen Woodman Haskell,
Frederick Nichols,
Angell Boss Babbitt,
Edward Cummings,
Edwin Cull Howell,
Frank Elwood Jennison.

Disquisitions.

Edward Knowles Butler,
James Hamlet Bolt Easton,
Charles Enoch Robinson,
Robert Berry Ennis,
Alonzo Wilder Pollard,
Percival James Eaton,
John Downer Pennock,
Richard Pearce Francis,
James Milton Hall,
George Henry Nichols,
Archibald Lowery Sessions,
Walter Edward Clifton Smith,
William Alvah Rublee,
William Lawrence Dana,
William Hall Williams,
Henry Francis Sears,
Henry Ransom Edwards,
Walter Everard Paul,
Frederic Gray Reed,
William Dunning Sullivan,
Ernest Sanford Jack,
Henry Bromfield Cabot,
George Scott Winslow,
James Atkins Noyes,
Paul Jones,
Charles Dexter Canterbury,
William Wendell Bryant,
Lucas Lee Baker,
Francis Lewis Clark,
Oscar Edward Perry,
Charles Francis Morse,
Sollace Mitchell,
Edward Everett Hale,
Howard Lilienthal,
John William Fox,
Richard Baker Wilcox,
William Edgar Nies,
Charles Sumner Hamlin,
William Tyler Lord,
William Wadsworth Wentworth,
Joseph Edwin Davis,
Charles Witherle Hooke,

Arthur Kingsbury Stone,
Henry Howland Crapo,
Walter Curtis,
Henry Martyn Hall,
Robert Gordon Butler,
Edward Perry Warren,
George Patrick Morris,
Ormond Gerald Smith,
Edmund Swett Rousmaniere,
Horace Elmer Sprague,
Louis Osborne Johnson,
Daniel Appleton White,
Augustus Mendon Lord,
John Farwell Moors,
Edward Twisleton Cabot,
Walter Reeves Dame,
Sabin Pond Sanger,
William Halsey Garrison,
Jeffrey Richardson Brackett,
Reuben Burnham Moffat,
Charles Ranlet,
George Dixwell Burrage,
Charles Edgar Lewis Wingate,
Joseph Lee,
George Ebenezer Howe,
Osgood Putnam,
Clarence Getchell.

Honors at Graduation.

In Ancient Languages.

Herbert Marshall Lloyd,	Highest Honors.

In Classics.

Archibald Livingstone Hodges,	Highest Honors.
Angell Boss Babbitt,	Honors.
Walter Alias Damon,	Do.
Frank Elwood Jennison,	Do.
Edwin Guthrie McInnes,	Do.
Joseph Henry Sheffield,	Do.
John Henry Wigmore,	Do.

In Modern Languages.

Charles Hall Grandgent,	Highest Honors.

In Philosophy.

Edward Cummings,	Honors.

In Political Science.

Robert Emmet O'Callaghan,	Highest Honors.
George Henry Heilbron,	Honors.

In History.

John Hubbard Wilkins Edgerly,	Highest Honors.
Everett Wyman Sawyer,	Do.
Charles Joseph Hubbard,	Honors.
Patrick Michael Keating,	Do.
Samuel Norris,	Do.

In Mathematics.

Mellen Woodman Haskell,	Honors.
Edwin Cull Howell,	Do.
Alfred Church Lane,	Do.

In Natural History.

Walter Lincoln Burrage,	Honors.
Henry Barton Jacobs,	Do.

HONORABLE MENTION AT GRADUATION.

Gwynn Murdoch Andrews. *History.*
Luther Atwood. *Natural History; Greek.*
Angell Boss Babbitt. *Greek; Latin; English Composition.*
Thomas Cogswell Bachelder. *German; Mathematics.*
Lucas Lee Baker. *Natural History.*
David Nevins Baxter. *German.*
Horace Binney. *History; English Composition.*
Jeffrey Richardson Brackett. *History; English Composition.*
William Wendell Bryant. *History; English Composition.*
James Merrill Burch. *History.*
Albert Cameron Burrage. *German; English Composition.*
George Dixwell Burrage. *History; Philosophy; English Composition.*
Walter Lincoln Burrage. *Natural History.*
Edward Knowles Butler. *History.*
Robert Gordon Butler. *History; English Composition.*
Edward Twisleton Cabot. *History; Greek; Latin.*
Henry Bromfield Cabot. *Political Economy.*
Charles Dexter Canterbury. *History.*
Francis Lewis Clark. *Natural History.*
Russell Sturgis Codman. *History.*
Joseph Randolph Coolidge. *German; Greek.*
Louis Arthur Coolidge. *History.*
Thomas Washington Cowgill. *English; Greek; English Composition.*
Henry Howland Crapo. *Philosophy.*
Edward Cummings. *History; Philosophy; English Composition.*
Walter Curtis. *Natural History.*
Walter Reeves Dame. *History.*
Walter Elijah Damon. *Greek; Latin.*
William Lawrence Dana. *Natural History.*
Arthur Clark Denniston. *History; Political Economy.*
George Garrett Dunn. *History.*
Morris Earle. *Natural History.*
James Hamlet Bolt Easton. *History.*
Percival James Eaton. *Chemistry; Natural History.*
John Hubbard Wilkins Edgerly. *History.*
Henry Ransom Edwards. *History.*
Robert Berry Ennis. *Natural History.*
George William Evans. *Physics; Mathematics.*
William Faxon. *Philosophy; History; English Composition.*
Francis Britain Fay. *Natural History; English Composition.*
John William Fox. *English Composition.*

Richard Pearce Francis. *Natural History.*
James Newton Garratt. *Chemistry; Natural History; Mathematics.*
Clarence Getchell. *Chemistry; Natural History.*
Charles Hall Grandgent. *French; German; English Composition.*
Edward Everett Hale. *History; Political Economy.*
Henry Martyn Hall. *Natural History.*
James Milton Hall. *History.*
Charles Sumner Hamlin. *English Composition; Political Economy.*
Mellen Woodman Haskell. *German; Mathematics; English Composition.*
George Henry Heilbron. *History; English Composition; Political Economy.*
George Ross Hewitt. *Philosophy; English Composition.*
Archibald Livingstone Hodges. *Greek; Latin; English Composition.*
Benjamin Blake Holmes. *German.*
Charles Witherle Hooke. *Chemistry.*
Franklin Henry Hooper. *History.*
George Ebenezer Howe. *History; English Composition.*
Edwin Cull Howell. *Latin; Mathematics; English Composition.*
Charles Joseph Hubbard. *History; English Composition.*
Ernest Sanford Jack. *Natural History.*
Henry Barton Jacobs. *Natural History.*
Frank Elwood Jennison. *Greek; Latin.*
Louis Osborne Johnson. *Natural History.*
Paul Jones. *History.*
Frank Warton Kaan. *Political Economy.*
Patrick Michael Keating. *History; Greek.*
Chokichi Kikkawa. *English Composition.*
Stephen Herrick Knight. *Chemistry; Natural History.*
Alfred Church Lane. *Mathematics.*
Howard Lilienthal. *Natural History.*
Herbert Marshall Lloyd. *Greek; English Composition.*
Morris Loeb. *Chemistry; English Composition.*
Augustus Mendon Lord. *English; English Composition.*
William Tyler Lord. *Natural History.*
George Emerson Lowell. *German; Greek; Latin.*
Arthur Lyman. *Philosophy; History.*
Edwin Guthrie McInnes. *Greek; History; Mathematics.*
Arthur Richmond Marsh. *Greek; English Composition.*
Sollace Mitchell. *Natural History.*
Reuben Burnham Moffat. *History.*
John Farwell Moors. *Philosophy.*
George Patrick Morris. *Greek.*
Charles Francis Morse. *German.*
Frederick Nichols. *History; English Composition.*
George Henry Nichols. *German; English.*
William Edgar Nies. *Philosophy; English Composition.*
Samuel Norris. *History; Political Economy.*
James Atkins Noyes. *Chemistry; Natural History.*
Robert Emmet O'Callaghan. *Philosophy; Political Economy.*

Walter Everard Paul. *Natural History.*
Sumner Bass Pearmain. *German ; Natural History.*
John Downer Pennock. *Chemistry.*
Oscar Edward Perry. *Greek.*
Alonzo Wilder Pollard. *History.*
Herbert Putnam. *Latin ; English Composition ; Political Economy.*
Osgood Putnam. *Philosophy, English Composition.*
Charles Ranlet. *Philosophy.*
Fletcher Ranney. *History ; English ; English Composition.*
Frederic Gray Reed. *Chemistry ; Greek.*
Daniel Merchant Richardson. *Italian ; Spanish.*
Charles Enoch Robinson. *Fine Arts.*
Edmund Swett Rousmaniere. *Philosophy ; English Composition.*
William Alvah Rublee. *French.*
Sabin Pond Sanger. *German.*
Everett Wyman Sawyer. *History ; Political Economy ; English Composition.*
Henry Francis Sears. *German.*
Archibald Lowery Sessions. *History.*
Joseph Henry Sheffield. *Greek ; Latin.*
Ormond Gerald Smith. *French ; English Composition.*
Walter Edward Clifton Smith. *Philosophy.*
Henry Lloyd Smyth. *Mathematics.*
Horace Elmer Sprague. *Greek ; Latin.*
Arthur Kingsbury Stone. *History.*
William Dunning Sullivan. *Natural History.*
Alfred Tonks. *Chinese.*
William Wadsworth Wentworth. *Natural History.*
Daniel Appleton White. *Philosophy.*
John Henry Wigmore. *Greek ; Latin ; English Composition ; Political Economy.*
Richard Baker Wilcox. *History ; Political Economy ; English Composition.*
William Hall Williams. *Philosophy.*
Charles Edgar Lewis Wingate. *English Composition ; Political Economy.*
George Scott Winslow. *History.*
Arthur Henry Woodbury. *Greek ; English Composition.*
Charles Pomeroy Worcester. *Chemistry ; Natural History.*
Alphonso Adelbert Wyman. *Political Economy.*

SECOND-YEAR HONORS.

In Classics.

Juniors :	
Charles Francis Aiken,	Honors.
James Richard Jewett,	Do.
Francis James Riley,	Do.
Thomas Stanley Simonds,	Do.
Sophomores :	
Arthur Deloraine Corey,	Highest Honors.
Theodore Dunham,	Do.

Henry Theodore Hildreth,	Highest Honors.
Rollin North Larrabee,	Do.
Daniel William Lothman,	Do.
Thomas Aloysius Mullen,	Do.
Abner Ernest Strong,	Do.
Richard Aldrich,	Honors.
Clarence Walter Ayer,	Do.
Paul Shipman Drane,	Do.
John Hays Gardiner,	Do.
Charles Bertie Gleason,	Do.
William Leverett,	Do.
Edward Dudley Marsh,	Do.
George Read Nutter,	Do.
Frederic Eugene Puffer,	Do.
William Christopher Smith,	Do.
Andrew Henshaw Ward,	Do.
Edward Franklin Weld,	Do.
Edward Blake Young,	Do.

In Mathematics.

Juniors:

George Andrew Stewart,	Highest Honors.

Sophomores:

Hugh Henry Brogan,	Highest Honors.
George Fauntleroy Davidson,	Do.
William Morrow McInnes,	Do.
Arthur Gordon Webster,	Do.
Daniel Lyman Hazard,	Honors.
James Lee Mitchell,	Do.
Abner Ernest Strong,	Do.

IV.

PRIZES.

DETURS.

The following students received books, called "Deturs," from the foundation of Edward Hopkins, for excellence in scholarship: —

Freshmen of 1881–82.

Charles Bertie Gleason,
Thomas Aloysius Mullen,
Richard Aldrich.

Freshmen of 1882–83.

John Henry Huddleston,
Edmund Nathaniel Snyder,
Joseph Newell Palmer,
Charles Sumner Balcombe,
Walter Bowen Waterman,
Edward Everett Rankin,

George Rice Carpenter,
Hammond La Monte,
Eben Richards,
George Edwin Howes,
Nehemiah Samuel Kenison,
William Fogg Osgood,
Charles Thornton Libby,
Alfred Henry Lloyd,
Herbert Bacon Hutchins,
Myron Wallace Richardson,
Clarence Wright Smith,
Percy Gardner Bolster,
Thomas Hovey Gage,
Henry Edward Fraser,
Selwyn Lewis Harding,
Boylston Adams Beal,
John McKinstry Merriam,
Walter Thomas Clark,
Albert Augustus Gleason,
Frank Burr Mallory,
Fred Theodore Lincoln,
Binney Gunnison.

Bowdoin Prizes.

I.

George Pellew, of the Class of 1880, of the Law School.
George Lyman Kittredge, of the Class of 1882.
Charles Bingham Penrose, of the Class of 1881, Graduate Student in Physics.

II.

Heinrich Conrad Bierwirth, of the Class of 1884.
Edward Wheeler Frost, of the Class of 1884.
Lewis Edward Gates, of the Class of 1884.

III. *a*.

Arthur Richmond Marsh, of the Class of 1883.

III. *b*.

Philip Henry Goepp, of the Class of 1884.

IV.

Francis Britain Fay, of the Class of 1883.
Charles Alexander Whittemore, of the Class of 1885.

Boylston Prizes for Elocution.

First Prizes.

George Burnap Morison, of the Class of 1883.
Fred Leland Sawyer, of the Class of 1883.

Second Prizes.

George Russell Agassiz, of the Class of 1884.
Edwin Everett Jack, of the Class of 1884.
William Hussey Page, of the Class of 1883.

LEE PRIZES FOR READING.

Sophomores.

Howard Augustus Taylor,
James Henry Payne,
Herbert Bacon Hutchins,
Odin Barnes Roberts,
Henry Edward Fraser.

Freshmen.

Winthrop Tisdale Talbot, from Boston Latin School.
Franklin Elmer Ellsworth Hamilton, from Boston Latin School.
Livingston Boyd Stedman, from Roxbury Latin School.
Archibald Cary Coolidge, from Adams Academy.

V.

DEGREES.

Bachelors of Arts of the Class of 1883	205
Bachelors of Arts of former Classes	9
Bachelors of Divinity	6
Bachelors of Laws	19
Doctors of Medicine	73
Doctors of Dental Medicine	8
Bachelors of Science	5
Bachelor of Agriculture	1
Doctors of Philosophy	5
Masters of Arts	31

HONORARY DEGREES.

Doctors of Laws.

George Edward Ellis,
Francis Amasa Walker.

Doctor of Divinity.

Charles Babbidge.

VI.

COMMITTEES OF THE OVERSEERS FOR 1883.

To visit the University.

President of the Board of Overseers.
His Excellency the Governor.
His Honor the Lieutenant-Governor.
The President of the Senate.
The Speaker of the House of Representatives.
The Secretary of the Board of Education.
The Secretary of the Board of Overseers.
The Chairman of each of the Visiting Committees.

To visit the College. — On Government.

Charles R. Codman.
Edwin P. Seaver.
Edward E. Hale.
Theodore Lyman.
Henry Lee.
John Noble.
J. T. G. Nichols.
Waldo Higginson.
Le Baron Russell.
Moorfield Storey.
John Fiske.
James E. Cabot.
Richard M. Hodges.
Solomon Lincoln.
John T. Morse, Jr.

To visit the College. — On Languages.

Le Baron Russell.
Robert D. Smith.
Thomas W. Higginson.
John Noble.
Arthur Dexter.
W. B. Swett.
William J. Rolfe.
Charles P. Curtis.
Robert E. Babson.
Edward Edes.
Carl Wolff.
Lucius H. Buckingham.
Octavius B. Frothingham.
Thomas J. Cushing.
Francis A. Waterhouse.
Horatio G. Curtis.
Francis H. Peabody.
Henry W. Haynes.
Robert Hale Bancroft.
Francis Peabody, Jr.

To visit the College. — On Rhetoric and English Literature.

Moorfield Storey.
Charles R. Codman.
George B. Chase.
Roger Wolcott.
Henry W. Foote.
Charles P. Curtis.
Josiah Quincy, Jr.

To visit the College. — On History and Political Science.

John Fiske.
John T. Morse, Jr.
Alexander McKenzie.
Thomas W. Higginson.
Henry C. Lodge.
Edward G. Porter.
John O. Means.
James H. Means.
Russell Gray.
Abbott Lawrence.
Brooks Adams.

To visit the College. — On Philosophy.

James E. Cabot.
Alexander McKenzie.
Charles F. Adams, Jr.
Joseph B. Warner.
John O. Means.
John Fiske.

To visit the College. — On Mathematics, Physics, and Chemistry.

Edwin P. Seaver.
Daniel B. Hagar.
William Watson.
George V. Leverett.
J. D. Runkle.
Percival Lowell.
E. D. Leavitt, Jr.
Channing Whitaker.
Oliver Wadsworth.
Francis Blake, Jr.
Robert Amory.
Walter C. Cabot.

To visit the College. — On Natural History.

Richard M. Hodges.
Theodore Lyman.
William H. Niles.
Francis Skinner.
Edward T. Bouvé.
William Brewster.

To visit the College. — On Fine Arts and Music.

Henry Lee.
Charles C. Perkins.
S. L. Thorndike.
John S. Dwight.
William F. Apthorp.
Charles G. Loring.
Charles A. Cummings.
J. Francis Tuckerman.
W. P. P. Longfellow.
Robert Boyd.

To visit the Divinity School.

Edward E. Hale.
James F. Clarke.
Phillips Brooks.
Alexander McKenzie.
Edward H. Hall.
Artemas B. Muzzey.
Franklin Johnson.
Waldo Higginson.
Henry W. Foote.
Charles F. Dole.
Thomas Hill.
Arthur Brooks.
F. W. Holland.

To visit the Law School.

William G. Russell.
John Lowell.
Leverett Saltonstall.
George O. Shattuck.
Darwin E. Ware.
William C. Endicott.
Robert D. Smith.
Francis E. Parker.
Solomon Lincoln.
Robert M. Morse, Jr.
Francis C. Barlow.
Peter B. Olney.
Charles C. Beaman, Jr.
Edmund Wetmore.

To visit the Scientific School, the Bussey Institution, the Peabody Museum of American Archæology and Ethnology, and the Museum of Comparative Zoölogy.

Morrill Wyman.
Theodore Lyman.
R. M. Hodges.
Stephen Salisbury.
John O. Sargent.
Henry P. Kidder.
Robert W. Hooper.
Abbott Lawrence.
Francis M. Weld.
Channing Whitaker.
Charles O. Thompson.
T. Jefferson Coolidge.
Alphonse Fteley.
Clemens Herschel.
Ernest W. Bowditch.
S. M. Felton.
Thomas C. Clarke.

To visit the Medical and Dental Schools.

Le Baron Russell.
Morrill Wyman.
Richard M. Hodges.
Samuel A. Green.
Joseph Sargent.
Frederic Winsor.
George C. Shattuck.
Hall Curtis.
Samuel L. Abbott.
Francis M. Weld.
Algernon Coolidge.
John C. Dalton.
Austin Flint.

To visit the Observatory.

James F. Clarke.
Charles R. Codman.
William Amory.
Amos A. Lawrence.
J. Ingersoll Bowditch.
John C. Palfrey.
George I. Alden.
Robert T. Paine.
Robert C. Winthrop.
Charles F. Choate.
Alvan Clark.
Frederic O. Prince.
Augustus Lowell.
J. Montgomery Sears.
Simon Newcomb.
T. Jefferson Coolidge.
Francis H. Peabody.

To visit the Library.

Samuel A. Green.
Phillips Brooks.
John Fiske.
John T. Morse, Jr.
John O. Sargent.
William W. Greenough.
Charles A. Cutter.
George W. Wales.
Charles C. Smith.
Samuel S. Green.
Stephen Salisbury, Jr.
Samuel Eliot.
Francis V. Balch.
Henry G. Denny.
Charles Deane.
Henry F. Jenks.
Mellen Chamberlain.
George Dexter.
John M. Brown.
Charles F. Adams, Jr.
Robert Grant.

To visit the Botanic Garden and Herbarium.

Leverett Saltonstall.
Fred. L. Ames.
William Boott.
John Cummings.
William Gray, Jr.
Augustus Lowell.
H. H. Hunnewell.
J. Warren Merrill.
Francis A. Osborn.
John C. Phillips.
Henry P. Walcott.
Henry W. Sargent.
Henry C. Lodge.
J. Pierpont Morgan.
Thomas Meehan.

On Treasurer's Accounts.

Henry P. Kidder.
Amos A. Lawrence.
Charles H. Parker.
Israel M. Spelman.
George B. Chase.
Solomon Lincoln.

On Elections.

Charles R. Codman.
Moorfield Storey.
John Lowell.
William G. Russell.
Leverett Saltonstall.

On Reports and Resolutions.

Robert D. Smith.
Robert M. Morse, Jr.
Solomon Lincoln.
William Amory.
Francis E, Parker.
Henry Lee.
Charles F. Adams, Jr.

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TREASURER'S STATEMENT.

SIGILLVM + ACADEMIÆ HARVARDIANÆ IN NOV: ANG:

1883.

TREASURER'S STATEMENT.

To the Board of Overseers of Harvard College:—

The Treasurer of the College submits the Annual Statement of the financial affairs of the University, for the year ending August 31, 1883, in the usual form.

The Funds separately invested, with the income thereof, are as follows:—

	Principal.	Income.
UNIVERSITY.		
George B. Dorr Fund (part of),		
$2,000 Union Pacific R. R. Bonds,	sold during the year,	$50.50
$4,000 Chic., Burl. & Qu. " "		117.56
150 shares Morris & Essex R.R.Co.,		525.00
50 " Pittsb'g., Ft. Wayne & Chic. R. R. Co.,	$6,625.00	262.50
100 " New York & Harlem R. R. Co.,	10,250.00	500.00
187 " Pennsylvania Coal Co.,	25,525.50	1,496.00
Income received from Mr. Dorr's executor,		2,673.74
COLLEGE.		
Stoughton Scholarship (part of),		
Real Estate in Dorchester,	1,294.30	none
Pennoyer Scholarships (part of),		
Pennoyer Annuity in England,	4,444.44	277.50
Rumford Professorship (part of),		
French Rentes,	10,000.00	580.80
Jonathan Phillips Fund,		
Mortgage,	10,000.00	500.00
Daniel H. Peirce Fund (part of),		
Mortgage,	12,830.74	638.35
Samuel Ward's Gift,		
Ward's (Bumkin) Island, Boston Harbor,	1,200.00	50.00
Botanic Garden Fund (part of),		
$17,000 N. Y. Central R. R. Bonds, paid off during the year,		1,012.95
Amounts carried forward,	$82,169.98	$8,684.90

Amounts brought forward, ...	$82,169.98	$8,684.90

LIBRARY.

Charles Minot Fund (part of),		
$60,000, Buffalo, Bradford, & Pittsb. R. R. Bonds,	60,000.00	4,200.00
Ichabod Tucker Fund (part of),		
Policy of Mass. Hospital Life Insurance Co., . .	5,000.00	200.00

SCIENTIFIC SCHOOL.

John B. Barringer Fund (part of),		
40 shares Schenectady Bank Stock, ...	2,200.00	200.00

MEDICAL SCHOOL.

Edward M. Barringer Fund (part of),		
10 shares Schenectady Bank Stock, ...	600.00	25.00

MUSEUM OF COMPARATIVE ZOÖLOGY.

Agassiz Memorial Fund (part of),		
Personal notes (endorsed), ...	20,780.46	1,496.73

OBSERVATORY.

Anonymous gift (now used to pay annuity),		
$1,000, Michigan South'n & No. Indiana R.R. Bond,	1,000.00	70.00
$2,000, Cincinnati Municipal Bonds, ...	2,000.00	140.00
$2.000 Minneapolis Municipal Bonds, ...	2,000.00	160.00
50 shares Pittsburg, Fort Wayne, & Chicago, R. R. Stock, ...	5,000.00	350.00

SPECIAL FUNDS.

Bussey Trust,		
Real Estate, ...	413,092.80	17,109.30
Robert Troup Paine Fund (accumulating),		
$23,500 Mass. 5% Bonds, ...	26,957.50	1,149.72
New Law School Professorship (part of),		
Personal note, ...	90,000.00	4,500.00
	$710,800.74	$38,285.65

The other Funds of the College are invested as a whole. The general investments, with the income thereof, are as follows: —

Investments.	Principal, September 1, 1882.	Principal, August 31, 1883.	Income.
Notes, Mortgages, &c., ...	$843,836.83	$902,294.26	$42,208.63
Railroad Bonds and Premiums, . .	1,040,885.85	1,063,636.42	60,383.01
Railroad Stock, ...	106,811.93	106,811.93	8,274.00
New Boston Coal Mining Co. Bonds,	9,000.00	9,000.00	700.00
Bank Stock, ...	63,964.00	63,964.00	4,621.95
Manufacturing Stock, ...	102,058.29	103,658.29	6,425.00
Real Estate, ...	1,396,523.30	1,408,192.42	81,699.40
Unoccupied Lands, ...	75,487.79	74,487.79	
Brattle Street Reversion, ...	1,000.00	1,000.00	
Advances to Scientific School, . . .	4,707.27	4,055.30	282.44
" " Dental School, ...	14,488.37	13,659.36	869.30
" " Bussey Trust, ...	40,566.13	40,266.13	2,020.07
" " Dining Hall Association,	36,232.16	34,732.16	2,178.93
" " Scudder's Catalogue, .	208.86	190.58	
" " Books, ...	29.36		
" for altering Appleton Chapel,	2,859.62		
Term Bills due Oct., 1883, ...	70,016.74	75,397.36	
Term Bills overdue, ...	2,867.01	2,697.77	
Cash in Suffolk National Bank, .	9,211.25	7,195.40	
Cash in hands of Bursar, ...	5,090.99	1,855.66	
Totals of general investments,	3,825,345.75	3,913,094.83	209,657.73
Totals of special investments,	686,515.84	710,800.74	38,285.65
Amounts, . . .	$4,511,861.59	$4,623.895.57	$247,943.38

During the year there have been no important changes in the investments. The sum of $17,000, received in payment for $17,000 of New York Central R. R. bonds, which were held as a special investment for the Botanic Garden Fund, has been credited to the Lowell Fund for a Botanic Garden, in accordance with the provision made by those who gave the bonds in 1867. The sum of $1000 being the gain of capital from the payment at par of New York Central R. R. bonds held for the "general investments," has been credited to the account of "Unoccupied Lands," to reduce the book valuation of that investment. The account of "railroad bond premiums" has been charged with $4600 for the premium paid upon $25,000 of seven per cent bonds purchased, and it has been credited with $742.50 as the gain upon $27,000 of Chic., Burl. & Quincy R. R. bonds bought and sold during the year, and with $5460 which was taken from the interest received on $546,000 of seven per cent bonds held during the whole year. This account is also charged temporarily with $104.32 for the difference between accrued interest advanced and that repaid during the year. An additional story has been built upon the Gray Estate in Washington Street, at a cost of $12,119.12, of which $450 was paid in the previous year, and the valuation of the estate has been increased therefor during the year by the amount of $11,669.12. Such of the securities received for the George B. Dorr Fund and the E. M. Barringer Fund as could be advantageously sold have, in accordance with the settled policy of the University, been turned into cash and the amount thereof credited to those Funds against the "general investments." These securities were first entered at the executors' valuations, which in some cases differed considerably from the market value at the time they were transferred to the College, but as the College received the property as residuary legatee, the valuations were not important. The purchase of land in Dorchester was made in order to obtain suitable access to the "Stoughton Pasture," which is held for the Stoughton scholarship, subject to a lease for one hundred years, which will expire in 1896. The Stoughton Pasture is a part of the old real estate of the College which is exempted from taxation by the Constitution of Massachusetts. All other changes in the investments of the University are sufficiently accounted for by the receipts and payments hereinafter stated in detail.

The net income of the general investments ($209,657.73) has been divided at the rate of 5 ^{57} per cent among the Funds to which they belong, after allowing to the Medical School, Law School, and Physical Laboratory Building Funds a special rate of four per cent on their balances during the period of construction. The balance of $40.78 has been placed to the credit of the University account.

The rate of income this year as compared with that for 1881–82 shows a falling off of $\frac{5}{100}$ of one per cent, but as the rate is still above that which can now be got from new investments with sufficient security it is to be expected that there will be a further falling off from time to time. Large outlays during a single year for repairs, improvements, and insurance upon productive real estate often cause fluctuations in the rate of income which have no special significance. The cost of all improvements upon real estate, other than additions yielding increased income, is taken from the rent of the year in which the improvements are made. No other provision is made to offset the impairment of capital which is constantly going on, owing to the competition of newer buildings rather than the actual wearing out of the older ones.

The following table shows the income available for the departments dependent upon the College proper, and the expenditures in those departments: —

Interest on funds for		
University Salaries and Expenses, ...	$24,555.62	
College Expenses, ...	3,148.16	
Library, ...	1,331.62	
College Salaries, ...	29,583.85	
Gymnasium, and repairs on College buildings, . .	none.	
College Term bills, ...	173,002.27	
Sundry cash receipts, ...	8,742.46	
		240,363.98
Expended for		
University Salaries and Expenses, ...	$28,081.49	
College Expenses, ...	36,511.11	
Library Salaries and Expenses (not books), ...	20,011.93	
College Salaries, ...	137,624.19	
Gymnasium Expenses, ...	8,956.08	
Repairs and insurance on College Buildings not valued on Treasurer's books, ...	6,465.91	
		237,650.71
Balance, which has been carried to Stock Account, to repay in part the deficit of last year, ...		$2,713.27

A large increase in the number of undergraduates and the the receipt during the year of more than a year's income from the new George B. Dorr Fund have allowed a current expenditure for the University, College, and Library about equal to that of the previous year, increased expenses for some purposes being offset by reductions elsewhere. They have also provided the sums required for the taking of the old Gymnasium, and for the return to the "Stock Account" of $2713.27, as a partial repayment of last year's deficit. For 1881–82 the deficit for the University, College, and Library was $14,738.64.

For the Divinity School the income has been sufficient to meet increased outlay for improvements, and to give a surplus of $1322.59. For 1881–82 there was a surplus of $2819.41.

The decrease in the number of Law students has caused a deficit of $1674.46 for the Law School, notwithstanding gains in the income from the new Book Fund and from the Bussey Trust. For 1881–82 there was a surplus of $364.26. The terms of gift of the New Professorship Fund required its income to be added to the principal during the vacancy in the professorship.

The Medical School has made a surplus of $3562.20, notwithstanding increased expenses and a loss in fees from students. For 1881–82 the surplus was $7843.92. A serious fire occurred on May 11, 1883, in the new building for the Medical School, but the sum of $18,569.76 which was received therefor from the insurance companies fully covered the cost of repairs.

The Dental School has been able to largely increase its outlay for instruction and make a surplus of $829.01, which has been used to reduce the debt of the School. For 1881–82 the surplus was $1339.37.

For the Lawrence Scientific School there is a surplus of $651.97, which has been used to reduce the debt of the School. For 1881–82 the surplus was $197.87. The sum of $4226.23 from the income of the Agassiz Memorial Fund has been used to repay in part the notes given by Mr. Agassiz to the Memorial Fund for advances on account of the extension of the Museum building. Mr. Agassiz has continued to make very large private outlays for the benefit of the Museum.

The expenses of the Observatory have consumed all the subscriptions for current use received within the year and left a deficit of $2409.46, which has been provided for out of the annual subscriptions paid in advance during the year 1878–79. For 1881–82 there was a deficit of $1172.67.

The Bussey Institution has had gains in fees from students and in income from the Bussey Trust, which have allowed a considerable increase of expenditure. The deficit for the year is $755.05, but this has been provided for out of the surplus of the previous year which was $805.55.

The gross income from the Bussey stores slightly exceeded that of last year, but heavy expenditure for repairs and improvements, especially in the heating and hoisting department, has been necessary in continuation of the like expenditure of last year. There has, however, been a moderate gain in net income.

During the year the Mary Osgood Annuity Fund has become the Mary Osgood Book Fund, owing to the death of the annuitant, and a part of the Lucy Osgood Annuity Fund has for the like reason become the Lucy Osgood Book Fund. The name of the Botanic Garden Fund has been changed to that of the Botanic Department Fund, and the Stoughton Scholarship Fund has been separated from the "Exhibitions" account, which included it.

Gifts have been received during the year as follows:—

TO FORM NEW FUNDS OR INCREASE OLD ONES.

From Edward Russell, $125, to increase the scholarship founded by him.

From the Class of 1828, $1294, being the amount of the Class Fund, for the establishment of a scholarship to be called the "Scholarship of the Class of 1828."

From Rev. James G. Rodger, $600, to found a scholarship in Harvard College, and for the benefit of the Divinity School.

From the executor of George B. Dorr, property at valuations amounting to $111,150, on account of a residuary bequest "for the benefit of the general funds" of Harvard College without any restriction whatever. The sum of $2673.74 was also received from Mr. Dorr's executor as income from said property.

From the executor of Edward M. Barringer, property at valuations amounting to $27,159.53, on account of a residuary bequest for the benefit of the Medical School. This valuation considerably exceeded the market value of the property at the time it was received.

Subscriptions for the increase of the Botanic Department Fund, paid to Sept. 1, 1883, from

Alexander Agassiz . . .	$1000	William Perkins	$100
George Higginson . . .	1000	Jacob C. Rogers	100
Mrs. Frances A. Minns . .	250	Samuel D. Warren . . .	1000
			$3450

Subscriptions for the endowment of a Physical Laboratory, paid to Sept. 1, 1883, from

Frederick L. Ames	$10,000	Charles F. Choate	$500
Arthur W. Blake	500	William Endicott, Jr.	2000
			$13,000

Subscriptions to establish a fund of which the income shall be used for the purchase of books for the Law School, paid to Sept. 1, 1883, from

Francis Bartlett	$100.	Henry P Kidder, $2000 of bonds sold for	$1641.25
A friend, through Prof. Thayer	50.	Henry Villard (2d instalm't)	5000.
			$6791.25

Subscriptions for the further endowment of the Divinity School, paid to Sept. 1, 1883, from

Abbot, Prof. Ezra	$100.	Everett, Prof. C. C.	$100.
Allen, Rev. Joseph H.	40.	Fish, Rev. William H.	10.
Bixby, Rev. James T.	33.33	Hall, Rev. E. H.	30.
Bond, Rev. H. F.	10.	Hale, Rev. E. E.	33.33
Bowditch, J. Ingersoll	200.	Lee, Henry	300.
Collyer, Rev. Robert	25.	Lippitt, Henry	100.
Eliot, Charles W.	100.	Wendte, Rev. Charles W.	50.
			$1131.66

Subscriptions to be applied towards a fund for the endowment of the Dental School, paid to Sept. 1, 1883, from

Dr. George H. Ames	$20	Dr. A. B. Jewell	$20
Dr. F. E. Banfield	50	Dr. T. O. Loveland	50
Dr. A. G. Bouvé	20	Dr. H. C. Meriam	20
Dr. E. P. Bradbury	20	Dr. F. A. Merrill	20
Dr. E. C. Briggs	20	Dr. W. E. Page	40
Dr. D. M. Clapp	20	Dr. L. D. Shepard	20
Dr. T. H. Chandler	20	Dr. S. S. Silva	20
Dr. E. E. Frost	20	Dr. E. H. Smith	20
Dr. Thomas Fillebrown	20	Dr. J. G. W. Werner	20
			$440

Subscriptions to be applied towards a fund for the endowment of the Observatory, paid to Sept. 1, 1883, from

Amory, William	$2000	Kidder, Henry P., $3000 of bonds sold for	$2484.38
A friend, through Rev. James Freeman Clarke	10,000	Lyman, Arthur T.	500.
Claflin, William	100	Lyman, Theodore	200.
Delano, Joseph C.	250	Sears, Mrs. David	200.
Gardner, George	200	Ware, Dr. Charles E.	500.
Gardner, John L.	500	Wolcott, Mr. and Mrs. J. Huntington	200.
Johnson, Samuel, Jr.	250		
			$17,384.38

In order to increase the salary of the President of Harvard College subscriptions towards a fund have been paid to Sept. 1, 1883, from

Mr. and Mrs. Henry Adams	$1000	Mrs. John E. Lodge	$500
Frederick L. Ames	5000	Miss Anna C. Lowell	1000
George Baty Blake	500	Augustus Lowell	1000
Stanton Blake	500	Arthur T. Lyman	1000
Martin Brimmer	2000	Theodore Lyman	1000
Walter C. Cabot	500	George A. Nickerson	1000
F. Gordon Dexter	1000	Charles J. Paine	2000
W. E. C. Eustis	500	Francis E. Parker	250
William H. Forbes	250	George Putnam	250
John L. Gardner	2500	Henry B. Rogers	1000
Mrs. John L. Gardner	2500	W. G. Russell	250
George Higginson	5000	Stephen Salisbury	2000
James J. Higginson	1000	Philip H. Sears	1000
Edward W. Hooper	2000	George O. Shattuck	250
Henry P. Kidder	2000	Quincy A. Shaw	7000
Henry Lee	5000	Nathaniel Thayer	5000
Abbott Lawrence	500	J. Huntington Wolcott	100
			$56,350

Subscriptions towards a fund for retiring allowances to officers of the University, paid to Sept. 1, 1883, from

William Amory	$1032.22
Arthur T. Lyman	500.
	$1532.22

The Henry Bromfield Rogers Scholarship Fund has been established during the year. The President and Fellows have taken for University purposes the old Gymnasium building, and in accordance with the agreement made in 1859 with Mr. Rogers, who in that year anonymously gave the Gymnasium to the College, have appropriated a sum equal to its appraised value to a scholarship for undergraduates, amounting to $3180.50.

GIFTS FOR IMMEDIATE USE.

From George W. Wales, $200, for books for the Library, in continuance of former gifts for the same purpose.

Subscriptions for the current expenses of the Observatory, paid to Sept. 1, 1883, from

Adams, Charles Francis	$100
Ames, Fred. L.	100
Beal, James H.	50
Bremer, John L.	100
Brimmer, Martin	100
Cabot, Walter C.	50
Choate, Charles F.	100
Coolidge, T. Jefferson	100
Curtis, Charles P.	100
Dalton, Charles H.	50
Fay, R. S.	50
Forbes, J. M.	100
Gardner, John L.	100
Grew, Henry S.	50
Hemenway, Mrs. A.	100
Higginson, George	100
Hooper, Mrs. S.	100
Hunnewell, H. H.	100
Lodge, Mrs. Anna C.	50
Lowell, Augustus	$50
Norcross, Otis	100
Paine, Charles J.	50
Payson, Samuel R.	50
Pickering, E. C.	200
Pickman, W. D.	200
Phillips, John C.	100
Robbins, R. E.	50
Sears, Mrs. David	100
Sears, F. R.	50
Shattuck, G. O.	50
Shaw, Mrs. Cora L.	30
Thayer, Nathaniel	100
Upham, George P.	50
Weld, W. G.	50
Wheelwright, A. C.	50
Wigglesworth, Misses	100
Winthrop, Robert C.	50
	$3030

Subscriptions to aid in publishing the University Bulletin, paid to Sept. 1, 1883, from

A. Agassiz	$50
Charles P. Curtis	200
Henry Lee	50
C. S. Sargent	$50
W. B. Weeden	100
	$450

From an anonymous friend, $500, to increase the salary of the Professor of Entomology.

From Professor Josiah P. Cooke. $300, for the compensation of an assistant in Chemistry.

From the Dante Society, $100, for the purchase of books on Dante.

For lectures on Political Economy, through William Gray, Treasurer, $300.

Subscriptions towards the fund for the new building for the Medical School, paid to Sept. 1, 1883, from

Arthur Blake	$100
J. A. Burnham	1000
T. O. H. P. Burnham	$1000
Henry Woods	1000
	$3100

From Quincy A. Shaw, $500, and Mrs. Emily W. Appleton, $500, to be spent for the Museum of the Medical School.

From Thomas Jefferson Coolidge, the sum of $50,000, on account of his gift for the construction of the Jefferson Physical Laboratory.

From the Massachusetts Society for Promoting Agriculture, $1000, "as the salary during the current academic year of Mr. Sereno Watson, Curator of the Herbarium."

From Thomas G. Appleton, acting on behalf of his brother Nathan Appleton, $2500, to be applied towards the expenses incurred in the improvements of Appleton Chapel.

From Henry L. Higginson, $500, for the School of Veterinary Medicine.

From Louis A. Shaw, $109.61, for the purchase of books for the French Department.

The total amount of these gifts for immediate use is $63,089.61, as is also stated on page 14 of this report.

OTHER GIFTS.

From Edward John Ensor, a chronological chart.

From William E. Darwin, an etching showing the study of the late Charles Darwin as it appeared on the day of his death.

From Dr. R. M. Hodges and others, a bust of Professor Henry J. Bigelow, on condition that it shall be permanently placed in the surgical lecture room of the new Medical School building on Boylston St.

From Dr. George H. Tilden and Dr. Francis H. Williams and others, a portrait of Professor Oliver Wendell Holmes, for the Harvard Medical School.

From William Amory and others, acting as a committee of many graduates, a full-length portrait of President Rutherford B. Hayes, painted by William M. Chase.

From Henry Lee and Henry L. Higginson, a bust of Ralph Waldo Emerson, by Daniel C. French.

From Samuel J. Bridge, the offer of a bronze statue of John Harvard, to be made by Daniel C. French.

From Henry Lee, the offer to provide the sum of $1500 a year for five years, for additional instruction in the department of Political Economy.

EDWARD W. HOOPER,
Treasurer.

BOSTON, Dec. 20, 1883.

General Statement of Receipts and Disbursements for the year ending

INCOME.

Interest on notes, mortgages, and advances,		$54,689.45
" " Massachusetts 5% Bonds,		1,149.72
" " Policy Mass. Hospital Life Insurance Co.,		200.00
" " New Boston Coal Mining Co. Bond,		700.00
" " Railroad Bonds (after deductions for sinking premiums).		
Atchison, Topeka, & St. Fe, 7%,	$11,100.00	
Buffalo, Bradford & Pittsburg,	4,200.00	
Burlington & Mo. River in Nebraska, 6%,	15,450.00	
Chicago, Burlington & Quincy, 7%,	155.56	
Marion & McPherson. 1st Mortg., 7%,	8,863.90	
Ionia & Lansing, 1st Mortg., 8%,	10,131.11	
Marq., Hough. & Onton., 6%,	1,267.60	
Kan. City, St. Joseph & Council Bluffs, 7%,	3,000.00	
Kansas City, Topeka, & Western, 7%,	6,452.78	
Michigan Southern & Northern Indiana,	70.00	
Union Pacific, 6%,	50.50	
New York Central, 6%,	1,668.40	
Lincoln & No. Western, 7%,	3,424.17	
		65,834.02
" " Municipal Bonds.		
Cincinnati,	140.00	
Minneapolis,	160.00	
		300.00
Dividends on Stocks.		
Charles River National Bank,	480.00	
First (Cambridge) " "	400.00	
Fitchburg " "	168.00	
Massachusetts " "	132.00	
Merchants " "	1,584.00	
New England " "	222.00	
Old Boston " "	550.00	
Schenectady " " (N. Y.),	225.00	
Bank taxes refunded,	1,085.95	
		4,846.95
Amoskeag Manufacturing Co.,	1,440.00	
Amory " "	216.00	
Massachusetts " "	560.00	
Merrimack " "	850.00	
Nashua " "	1,440.00	
Stark Mills " "	1,200.00	
Wamsutta " "	704.00	
New Bedford Copper "	15.00	
		6,425.00
Chicago, Burlington & Quincy R. R.,	7,826.00	
Pittsfield & North Adams Railroad,	315.00	
Quincy Railroad Bridge Company,	133.00	
Pittsburg, Ft. Wayne, & Chicago R. R.,	612.50	
Morris & Essex R. R.,	525.00	
New York & Harlem R. R.,	500.00	
		9,911.50
Pennsylvania Coal Co.,		1,496.00
Amount carried forward,		$145,552.64

by the Treasurer of Harvard College,
August 31, 1883.

EXPENSES.

Paid to account of Expenses in the

University, as per Table I. (page 34),			$34,151.81
College, " " II. (page 36).			
Salaries for instruction,		$137,624.19	
Repairs,		6,452.57	
Insurance on College Edifices, not valued on Treasurer's books,		13.34	
General Expenses,		36,511.11	
Scholarships,		25,256.66	
Beneficiaries,		2,618.61	
Prizes for Reading, &c.,		1,512.10	
Botanic Garden,		5,778.81	
Herbarium,		1,884.00	
Gymnasium,		8,956.08	
			226,607.47
Library, as per Table III. (page 40).			
Books,		17,412.66	
Salaries and other expenses,		20,011.93	
			37,424.59
Divinity School, as per Table IV. (page 42).			
Salaries and other expenses,		21,535.55	
Scholarships and Beneficiaries,		1,489.01	
			23,024.56
Law School, as per Table V. (page 44),			132,378.46
Medical School, as per Table VI. (page 45),			161,491.72
Dental School, as per Table VII. (page 46),			4,945.77
Lawrence Scientific School, as per Table VIII. (page 47).			
Salaries and other expenses,		19,339.12	
Museum of Comparative Zoölogy,		22,654.66	
			42,043.78
Observatory, as per Table IX. (page 48),			19,146.99
Bussey Institution,	as per Table X. (page 48),	7,580.53	
School of Veterin'y Medicine,		609.22	
Arnold Arboretum,		6,592.33	
			14,782.08
Amount carried forward			$695,997.23

General Statement of Receipts and Disbursements for the year ending

INCOME.

Amount brought forward, . .		$145,552.64
Real Estate, from rents, &c. (gross receipts).		
Cambridge (Houses and Lands), ...	35,719.30	
Boston (general investments), ...	76,730.39	
Bussey stores, ...	33,595.98	
Sundry estates, ...	7,039.26	153,084.93
Term Bills.		
College, as per Table II., ...	173,002.27	
Divinity School, as per Table IV., ...	2,922.73	
Law School, as per Table V., ...	19,375.00	
Medical School, as per Table VI., ...	48,983.09	
Dental School, as per Table VII., ...	4,150.00	
Lawrence Scientific School, as per Table VIII., .	4,080.00	
Observatory, as per Table IX., ...	37.50	
Bussey Institution, as per Table X., ...	870.00	253,420.59
Sundries.		
From Wm. Pennoyer Annuity, ...	277.50	
Trustees of Thayer Scholarships, ...	3,600.00	
" Count Rumford's Legacy, . . .	580.80	
" Edward Hopkins, ...	233.88	
For use of Library by resident graduates and others,	165.00	
Degrees of A.M., and Ph.D., ...	390.00	
Degree of Bachelor of Arts out of course, and Examination fees, ...	744.00	
Fees in Infirmary and Laboratory, Dental School, .	1,295.90	
Printing by College Press for other Departments, .	997.50	
Sales of grass, wood, and old material, ...	1,399.26	
Sales of old examination papers, ...	65.36	
Sale of time signals from Observatory, ...	2,862.50	
Sale of tickets to Commencement Dinner of 1883, .	996.00	
Sale of books, pamphlets, catalogues, &c., ...	642.96	
Subscriptions to Veterinary Hospital, ...	450.00	
Use of lockers at Gymnasium, ...	1,753.00	
Returned by Beneficiaries, ...	85.00	
Fees for use of Gymnasium, ...	40.00	
Repayment of sundry advances, ...	29.36	
Proportion of expenses of Bursar's office repaid by other Departments, ...	356.14	
Proportion of expenses of Gymnasium repaid by other Departments, ...	858.66	17,822.82
Income received with George B. Dorr Fund, ...	2,673.74	
Sundry gifts for immediate use, see page 11, ...	63,089.61	65,763.35
Total amount of income, carried forward, . . .		$635,644.33

by the Treasurer of Harvard College, August 31, 1883.

EXPENSES.

Amount brought forward,			$695,997.23
Real Estate, expenses.			
Insurance.			
Cambridge,	$15.00		
Boston,	128.94		
Bussey stores,	66.75	210.69	
Taxes.			
Cambridge,	2,058.93		
Boston,	12,688.53		
Bussey stores, &c.,	7,826.28	22,573.74	
Interest.			
Bussey stores (on advances),		2,020.07	
Repairs, improvements, care, cleaning and sundries.			
Cambridge,	8,458.39		
Boston,	7,400.50		
Bussey stores,	8,197.74	19,056.63	
Heating and hoisting for Bussey stores, including repairs and renewal of apparatus,	5,988.29		
Less for sales of heat and power,	2,612.45	3,375.84	47,236.97
Annuities.			
Bussey,		6,662.34	
Gore,		900.00	
Mary Osgood,		789.91	
Lucy Osgood,		534.00	
Class of 1802,		120.00	
Anonymous,		720.00	
Bemis,		2,745.00	12,471.25
Sundry payments from income.			
To the Treasurer of the Museum of Fine Arts, from Gray Fund for Engravings,		822.28	
The income of the Daniel Williams Fund for the benefit of the Herring Pond and Mashpee Indians,		893.72	
The income of the Sarah Winslow Fund, to the Minister and Teacher at Tyngsboro', Mass.,		264.34	
For lectures on Political Economy,		300.00	
Jefferson Physical Laboratory, spent on building,		21,720.00	24,000.34
Amount carried forward,			$779,705.79

General Statement of Receipts and Disbursements for the year ending

Total amount of income, brought forward, . . $635,644.33

RECEIPTS EXCLUSIVE OF INCOME.

GIFTS.

Edward Russell Scholarship (additional), ...	$125.00	
Class of 1828 “	1,294.00	
Rodger “	600.00	
Henry B. Rogers “	3,180.50	
George B. Dorr Fund, ...	111,150.00	
Edward M. Barringer Fund (additional), ...	27,159.53	
Subscriptions to Law School Book Fund, ...	6,791.25	
“ “ Retiring Allowance “	1,532.22	
“ “ President's “	56,350.00	
“ for endowment of Botanic Garden, . . .	3,450.00	
“ “ “ “ Physical Laboratory, .	13,000.00	
“ “ “ “ Divinity School, . . .	1,131.66	
“ “ “ “ Dental School, . . .	440.00	
“ “ “ “ Observatory, ...	17,384.38	
		243,588.54

SALES.

$28,000	New York Central R. R. 6% bonds, paid off,	28,000.00	
4,000	Marq., Hough. & Ont. “ 6% called “ “ “	4,000.00	
9,000	Burl. & Mo. R. (Neb.) “6% “ “ “ “	9,000.00	
27,000	Chicago, Burl. & Quincy R. R. 7% bonds, .	33,952.50	
			74,952.50
3,000	Int.&Gt.North.R.R. 1st mort. 6% bds. (Dorr Fd.),	3,141.30	
3,000	“ “ “ “ “ 2d “ “ “ “ “	2,518.80	
7,000	Milw. & St. Paul “ 2d “ $7\frac{3}{10}$% “ “ “	8,807.65	
4,000	Chic., Burl. & Quincy R. R. 7% “ “ “	5,025.00	
5,000	Cincin. & Indiana “ 7% “ “ “	5,303.85	
2,000	Union Pacific “ 6% “ “ “	2,272.50	
33 shares	Chic., Burl. & Quincy R. R. Co., “ “	4,253.50	
10 “	N. Y. Guaranty & Indemnity Co., “ “	1,417.50	
25 “	Manhattan Gas Light Co., “ “	2,710.94	
150 “	Morris & Essex R. R. Co., “ “	9,290.62	
			44,741.66
110 “	N.Y.C. & H.R. R.R. Co. (E.M. Barringer Fd.),	13,763.75	
8 “	Lake Shore & Mich. So. “ “ “	888.00	
$1,000	N.Y.C.&H.R.R.R. 6% bond “ “ “	1,054.60	
4,500	U. S. Registered 4% bonds “ “ “	5,388.75	
			21,095.10

SUNDRIES.

From Dining Hall Association, to reduce debt, . . .	1,500.00	
Insurance, fire of Nov., 1872, for the Bussey Trust,	300.00	
“ for fire in new Medical School building,	18,569.76	
		20,369.76
Drafts on Baring Brothers & Company, ...	15,665.21	
Less paid Baring Brothers & Company in account,	10,661.11	
		5,004.10

Amount carried forward, . . $1,045,395.99

by the Treasurer of Harvard College,
August 31, 1883.

EXPENSES.

Total of expenses brought forward, ...		$779,705.79

INVESTMENTS AND SUNDRY PAYMENTS.

Chicago, Burl. & Quincy R. R. 7% bonds, $27,000 cost,	$33,210.00	
Ionia & Lansing " 8% " 20,000 "	22,248.75	
Kan. City, Top. & Western " 7% " 4,000 "	4,700.00	
Lincoln & No. Western " 7% " 6,000 "	7,200.00	
Atchison & Nebraska " 7% " 15,000 "	17,700.00	
Mass. 5% bond, 1894 (Paine Fund), . 1,000 "	1,152.50	
Land in Dorchester (Stoughton Scholarship), "	1,294.30	
16 shares Wamsutta Mills, ... "	1,600.00	
		89,105.55
Paid for accrued interest on above bonds, ...		1,319.39

Property received as a portion of the George B. Dorr Fund, at the executor's valuations:

$3,000 Intern. & Great North. R. R. 1st mort. 6% bonds,	$3,105.00	
3,000 " " " " " 2d " 6% "	3,105.00	
7,000 Milwaukee & St. Paul " 2d " 7$\frac{3}{10}$% "	8,750.00	
4,000 Chicago, Burl. & Quincy " 7% "	5,070.00	
5,000 Cincinnati & Indiana " 7% "	5,175.00	
2,000 Union Pacific " 6% "	2,277.50	
33 shares Chicago, Burl. & Quincy R. R. Co., ...	4,153.87	
10 " New York Guaranty & Indemnity Co., . . .	1,400.00	
25 " Manhattan Gas Light Co., ...	2,762.50	
150 " Morris & Essex R. R. Co., ...	9,300.00	
50 " Pittsburg, Ft. Wayne & Chicago R. R. Co.,	6,625.00	
100 " New York & Harlem River R. R. Co., . . .	10,250.00	
187 " Pennsylvania Coal Co., ...	25,525.50	
		87,499.37

Property received as a portion of the Edward M. Barringer Fund, at the executor's valuations:

110 shares New York Central & Hudson River R. R. Co.,	16,390.00	
8 " Lake Shore & Michigan Southern R. R. Co.,	1,080.00	
10 " Schenectady Bank Stock, ...	600.00	
$1,000 New York Central & Hudson River R. R. 6% bond,	1,040.00	
4,500 United States Registered 4% bonds, ...	5,040.00	
		24,150.00

Invested in Notes and Mortgages, ...	1,205,000.00	
Less Notes and Mortgages paid off, ...	1,150,704.97	
		54,295.03
Paid on account of improvements to Gray Estate, . .	11,669.12	
" " " " Mr. Agassiz's note from income of Memorial Fund, ...	4,226.23	
		15,895.35
Amount carried forward, ...		$1,051,970.48

General Statement of Receipts and Disbursements for the year ending

INCOME.

Amount brought forward,		$1,045,395.99
Advances to premiums, on $546,000 7% R. R. bonds, repaid,	5,460.00	
" " accrued interest on bonds repaid, ...	1,215.07	
" " account for altering Appleton Chapel, repaid (balance), ...	359.62	
		7,034.69

Balance, September 1, 1882.

Cash in Suffolk National Bank, ...	$9,211.25	
Cash in hands of Allen Danforth, Bursar, ...	5,090.99	
Term Bills due October, 1882, ...	70,016.74	
" " over due, ...	2,367.01	
		86,685.99
		$1,189,116.67

by the Treasurer of Harvard College, August 31, 1883.

EXPENSES.

Amount brought forward, ... $1,051,970.48

Balance, August 31, 1883.

Cash in Suffolk National Bank, ...	$7,195.40	
Cash in hands of Allen Danforth, Bursar, ...	1,855.66	
Term Bills due October, 1883, ...	75,397.36	
" " overdue, ...	2,697.77	
		87,146.19
		$1,139,116.67

The following Account exhibits the State of the Property, as embraced in the Treasurer's Books, August 31, 1883.

Notes and Mortgages.				
Mortgages			$365,125.00	
Long Wharf Co.'s Notes			60,000.00	
Manufacturing Co.'s Notes			500,000.00	
Personal Notes for Agassiz Memorial Fund			20,780.46	
Personal Note for new professorship in Law School			90,000.00	
				$1,035,905.46
Massachusetts 5% Bonds,	$23,500	valued at		26,957.50
New Boston Coal Mining Co. Bonds,	10,000	" "		9,000.00
Municipal Bonds.				
Cincinnati,	2,000.00	valued at	2,000.00	
Minneapolis,	2,000.00	" "	2,000.00	
				4,000.00
Railroad Bonds.				
Burl. & Mo. R. in Nebr. non ex. 6%,	250,000	val'd at	255,173.50	
Kan. City, St. Jos. & C.B. 1st M., 7%,	50,000	" "	50,000.00	
Lincoln & No. West., 1st M., 7%,	63,000	" "	63,000.00	
Atch., Top., & St. Fé, 1st M., 7%,	185,000	" "	185,000.00	
Kan. City, Top., & West., 1st M. 7%,	108,000	" "	108,000.00	
Marion & McPherson, 1st M., 7%,	150,000	" "	150,000.00	
Ionia & Lansing, 1st Mortg., 8%,	141,000	" "	139,866.25	
Atchison and Nebraska, 7%,	15,000	" "	15,000.00	
Marqu., Hough. & Onton., 6%,	19,000	" "	19,942.50	
Buffalo, Bradford, and Pittsb., 7%,	60,000	" "	60,000.00	
Michigan So. and No. Indiana, 7%,	1,000	" "	1,000.00	
Railroad Bond Premiums,			77,654.17	
				1,124,636.42
Railroad Stock.				
Chicago, Burlington, and Quincy,	1,001	shares,	99,261.93	
Pittsburgh, Fort Wayne and Chicago,	100	"	11,625.00	
Pittsfield and North Adams,	63	"	6,300.00	
Quincy R. R. Bridge Co.,	10	"	1,250.00	
New York and Harlem,	100	"	10,250.00	
				128,686.93
Manufacturing Stock.				
Amory,	36	shares,	3,600.00	
Amoskeag,	12	"	10,800.00	
Massachusetts Mills,	7	"	6,600.00	
Merrimack,	17	"	17,000.00	
Nashua,	36	"	25,560.00	
New Bedford Copper Co.,	5	"	250.00	
Pacific Mills,	20	"	17,468.29	
Stark Mills,	12	"	11,900.00	
Wamsutta Mills,	96	"	10,480.00	
				103,658.29
Amount carried forward,				$2,432,844.60

Amount brought forward, ...			$2,432,844.60
Bank Stock.			
Charles River, ...	60 shares,	6,000.00	
First Cambridge, ...	50 "	5,000.00	
Fitchburg, ...	24 "	2,403.00	
Massachusetts, ...	12 "	3,000.00	
Merchants, ...	264 "	34,732.00	
New England, ...	37 "	3,896.00	
Old Boston, ...	200 "	8,933.00	
Schenectady (N. Y.), ...	50 "	2,800.00	
			66,764.00
Real Estate.			
Houses and Lands in Cambridge yielding income,		357,163.83	
Unimproved Lands in Cambridge, ...		74,487.79	
Bussey Real Estate in Boston and Dedham, . .		413,092.80	
Amory Estate, Franklin Street, Boston, . . .		165,615.81	
Webb Estate, Washington Street, Boston, . .		164,604.79	
Andrews Estate, Washington Street, Boston, .		165,562.00	
Gray Estate, Washington Street, Boston, . . .		487,119.12	
Estate on Hawley Street, Boston, ...		38,650.78	
Estate on Hawkins Street, "		29,476.09	
Ward's (Bumkin) Island, Boston Harbor, . .		1,200.00	
Reversion of Buildings on Brattle Street, Boston,		1,000.00	
Land in Dorchester, ...		1,294.30	
			1,899,267.31
Sundries.			
In hands of Count Rumford's Trustees in Paris,		10,000.00	
Annuity of William Pennoyer, valued at . . .		4,444.44	
Policy of the Mass. Hospital Life Insurance Co.,		5,000.00	
Pennsylvania Coal Co., 187 shares, ...		25,525.50	
Due from Dining Hall Association, ...		34,732.16	
" " Lawrence Scientific School, ...		4,055.30	
" " Bussey Trust, ...		40,266.13	
" " Dental School, ...		13,659.36	
Advances to Scudder's Catalogue, ...		190.58	
Term bills due October, 1883, ...		75,397.36	
" " overdue, ...		2,697.77	
			215,968.60
Cash in Suffolk National Bank, ...		7,195.40	
" " hands of Allen Danforth, Bursar, ...		1,855.66	9,051.06
		Total	$4,623,895.57

The foregoing Property represents the following Funds and Balances, and is answerable for the same.

UNIVERSITY FUNDS.

Principal, Sept. 1, 1882.		Principal, Aug. 31, 1883.	
$84,962.25	Stock Account (so called), ...	$87,675.52	
141,638.74	Insurance and Guaranty Fund (so called),	141,638.74	
5,250.00	**Samuel D. Bradford** Fund, ...	5,250.00	
15,750.00	**Israel Munson** Fund, ...	15,750.00	
16,871.63	**Leonard Jarvis** Fund, ...	16,871.63	
1,242.38	**Peter C. Brooks** Fund for building a President's House, ...	1,283.64	
155.73	**Thomas Cotton** Fund, ...	155.66	
57,233.40	**John Parker** Fellowships, ...	57,221.28	
10,865.70	**Harris** Fellowships, ...	10,578.54	
12,244.36	**John Thornton Kirkland** Fellowship,	12,176.35	
10,311.83	**James Walker** Fellowship, ...	10,686.21	
28,773.76	**Rogers** Scholarship, ...	29,576.47	
1,688.39	**Sumner** Prize Fund, ...	1,782.41	
300.00	**Robert N. Toppan** Prizes	150.00	
9,000.00	**Sever** Fund (unrestricted)	9,000.00	
23,010.13	Retiring Allowance Fund, ...	25,890.35	
25,000.00	**John C. Gray** Fund, ...	25,000.00	
	President's Fund, ...	57,125.18	
	George B. Dorr Fund, ...	110,792.79	
			618,554.77

COLLEGE FUNDS.

Principal, Sept. 1, 1882.		Principal, Aug. 31, 1883.	
27,748.64	**Alford** Professorship, ...	27,748.64	
28,337.40	**Boylston** "	28,337.40	
21,619.50	**Eliot** "	21,619.50	
10,000.00	" " (**Jon. Phillips's** gift),	10,000.00	
3,500.01	**Erving** "	3,500.01	
35,990.99	**Fisher** "	35,990.99	
20,217.08	**Hersey** "	20,217.08	
18,575.78	" " (**Thomas Lee's** gift),	19,610.46	
3,747.33	**Hollis** " (Mathematics), . .	3,747.33	
34,441.96	**Hollis** " (Divinity), . . .	34,560.38	
43,062.93	**McLean** "	43,062.93	
21,000.00	**Perkins** "	21,000.00	
25,020.19	**Plummer** "	25,020.19	
52,500.00	**Pope** "	52,500.00	
52,996.37	**Rumford** "	52,996.37	
23,139.83	**Smith** "	23,139.83	
16,240.38	Fund for Permanent Tutors, ...	16,240.38	
125,000.00	**Class Subscription** Fund, ...	125,000.00	
12,766.91	**Daniel H. Peirce** "	12,830.74	
2,031.76	**Paul Dudley** Fund for Lectures, . .	2,144.94	
31,500.00	**Jonathan Phillips** Fund (unrestricted)	31,500.00	
$1,053,735.36	. . . . . . **Amounts carried forward,**	$610,767.17	618,554.77

Principal, Sept. 1, 1882.		Principal, Aug. 31, 1883.	
$1,053,735.36	. . . . Amounts brought forward, .	$610,767.17	618,554.77
1,050.00	**John A. Blanchard** Fd. (unrestricted)	1,050.00	
3,416.40	**John W. P. Abbot** “ “	3,606.67	
5,600.00	**Daniel Austin** “ “	5,600.00	
346.16	**Henry Flynt's** Bequest, ...	345.99	
2,550.05	**Abbot** Scholarship, ...	2,542.09	
795.72	**Alford** “	800.06	
5,137.18	**Bartlett** “	5,173.31	
5,425.24	**Bassett** “	5,452.41	
11,756.10	**Bigelow** “	11,660.91	
106,332.71	**Bowditch** “	107,255.46	
570.17	**Bright** “ (balance), . . .	587.67	
2,743.10	**Browne** “	2,745.89	
7,146.39	**Class of 1802** Scholarship, ...	7,174.42	
3,099.37	“ **1814** “	3,071.98	
5,010.06	“ **1815** “ **(Kirkland)**,	5,039.12	
3,748.32	“ **1817** “	3,757.08	
	“ **1828** “	1,351.04	
2,634.12	“ **1835** “	2,630.83	
3,739.94	“ **1841** “	3,773.26	
2,997.83	“ **1852** “ **(Dana)**, .	3,164.82	
6,663.48	**Crowninshield** “	7,034.56	
5,199.06	**Derby** “(George & Martha),	5,238.64	
5,351.66	**W. S. Eliot** “	5,349.77	
5,985.86	**Farrar** “	5,969.28	
2,463.30	**Greene** “	2,480.49	
6,394.37	**Hodges** “	6,750.52	
5,294.79	**Levina Hoar** “	5,389.72	
4,862.67	**Hollis** “	4,883.54	
530.88	**Matthews** “ (balance), .	735.14	
7,684.27	**Morey** “	7,612.27	
6,594.17	**Pennoyer** “	6,611.43	
	Rodger “	609.75	
	Henry B. Rogers	3,180.50	
673.90	**Edward Russell** “	843.40	
3,861.94	**Saltonstall** “ (Mary & Leverett),	4,077.05	
637.92	“ “ (Dorothy), . .	673.46	
5,371.34	**Slade** “	5,420.50	
3,175.99	**Sever** “	3,177.89	
9,419.85	**Sewall** “	9,444.54	
43,721.48	**Shattuck** “	44,356.74	
2,758.83	**Story** “	2,762.51	
	Stoughton “	2,181.50	
4,147.20	**Gorham Thomas** “	4,128.19	
6,563.05	**Toppan** “	6,628.61	
25,045.52	**Townsend** “	24,940.58	
3,907.51	**Walcott** “	3,958.53	
8,652.28	**Whiting** “	9,184.20	
11,899.16	**Exhibitions**, ...	9,569.98	
1,773.54	**Palfrey** Exhibition, ...	1,782.35	
1,200.00	**Samuel Ward** Fund, ...	1,200.00	
1,062.80	**John Glover** Fund, ...	1,122.01	
2,267.70	**Rebecca A. Perkins** Fund, . . .	2,394.03	
$1,420,998.69	. . . Amounts carried forward, . .	$987,141.86	618.554.77

Principal, Sept. 1, 1882.		Principal, Aug. 31, 1883.	
$1,420,998.69	. . . Amounts brought forward, . .	$987,141.86	$618,554.77
10,961.35	**Quincy Tufts** Fund, ...	10,923.88	
5,292.25	**Day** "	5,252.01	
10,216.31	**Munroe** "	10,213.19	
15,692.58	**Lee** Fund for Reading, ...	15,676.68	
4,337.94	**Boylston** Prizes for Elocution, . .	4,324.57	
11,925.18	**Bowdoin** Prizes for Dissertations, .	11,889.40	
994.23	**Hopkins** Gift for "Deturs," . . .	1,016.38	
54,255.77	Botanic Department Fund, ...	41,399.03	
35,882.31	**Lowell** Fund for a Botanic Garden, .	52,882.31	
18,100.42	Herbarium Fund, ...	18,258.59	
125.00	Salary account (unexpended balance),	125.00	
29,956.58	Physical Laboratory Endowment, . .	44,805.04	
			1,203,907.94
	LIBRARY FUNDS.		
11,287.47	Subscription for Library, ...	11,006.36	
2,140.40	**Bowditch** Fund, ...	2,089.48	
2,620.11	**Bright** "	2,494.20	
5,701.33	**Denny** "	5,264.49	
5,303.00	**Farrar** "	5,298.62	
3,515.70	**Haven** "	3,642.05	
5,755.36	**Hayward** "	5,712.17	
2,458.71	**Hollis** "	2,479.84	
2,079.52	**Homer** "	2,072.02	
5,797.68	**Lane** "	5,417.55	
20,469.98	**Lowell** "	20,897.96	
61,232.01	**Minot** "	62,227.38	
	Osgood " (Mary), ...	6,962.64	
	Osgood " (Lucy), ...	7,081.82	
5,188.81	**Salisbury** "	5,075.97	
20,538.32	**Sever** "	20,412.60	
4,455.24	**Shapleigh** "	4,315.60	
38,310.43	**Sumner** "	37,277.74	
5,018.29	**Tucker** "	5,014.07	
6,014.71	**Ward** "	5,041.82	
178.59	**Wales** "	130.80	
16,489.87	**Walker** "	16,351.42	
158.06	Sundry gifts, etc. (unexpended balances),	59.03	
			236,325.63
	LAW SCHOOL FUNDS.		
6,426.35	Law School (balance), ...	6,751.89	
15,750,00	**Dane** Professorship, ...	15,750.00	
23,979.82	**Bussey** "	23,979.82	
8,340.81	**Royall** "	8,340.81	
90,000.00	New "	92,962.50	
25,230.00	Law School Book Fund, ...	32,021.25	
125,139.80	" " Building Fund, ...	25,653.38	
			205,459.60
	MEDICAL SCHOOL FUNDS.		
67,312.98	Medical School (balance), ...	70,875.13	
19,192.65	**Jackson** Medical Fund, ...	19,192.65	
17,129.20	**Geo. C. Shattuck** Fund, ...	17,129.20	
12,031.53	**Warren** Fund for Anatom'l Museum,	12,243.37	
3,787.65	**Boylston** Fund for Medical Prizes,	3,748.64	
2,280.42	" " " " Books,	2,407.42	
$2,262,053.36	. . . . . Amounts carried forward,	$125,596.41	$2,264,247.94

Principal, Sept. 1, 1882.		Principal, Aug. 31, 1883.	
$2,262,053.36	. . . . . Amounts brought forward,	$125,596.41	$2,264,247.94
2,624.85	Medical Library Fund, ...	2,767.06	
101,420.32	Medical School Building Fund, . .	17,671.59	
2,000.00	**Quincy Tufts** Medical Fund, . .	2,000.00	
808.05	**Edward M. Barringer** Fund, . .	25,512.68	
			173,547.74

DIVINITY SCHOOL FUNDS.

23,486.17	General Fund, ...	24,808.76	
37,583.74	**Bussey** Professorship, ...	37,583.74	
16,015.81	**Parkman** "	16,015.81	
6,008.43	**Hancock** "	6,008.43	
44,345.73	**Winn** Prof. of Ecclesiastical History,	44,845.73	
20,280.38	**Dexter** Lectureship, ...	20,280.38	
9,184.69	**Henry Lienow** Fund, ...	9,184.69	
5,250.00	**Mary P. Townsend** Fund, . . .	5,250.00	
2,100.00	**Winthrop Ward** Fund, ...	2,100.00	
1,050.00	**Samuel Hoar** "	1,050.00	
1,050.00	**Abraham W. Fuller** Fund, . . .	1,050.00	
1,050.00	**Caroline Merriam** " . . .	1,050.00	
13,012.18	**Jackson** Foundation, ...	13,096.95	
2,177.95	**Joshua Clapp** Fund, ...	2,177.95	
1,050.00	**William Pomeroy** Fund, . . .	1,050.00	
525.00	**Hannah C. Andrews** Fund, . .	525.00	
8,326.65	**J. Henry Kendall** Scholarship, . .	8,511.96	
2,898.42	**Nancy Kendall** " . . .	3,059.84	
911.34	**Lewis Gould** Fund	911.34	
789.54	**Adams Ayer** "	833.54	
7,875.00	**Joseph Baker** "	7,875.00	
5,252.15	**Thomas Cary** Scholarships, . . .	5,194.69	
2,319.97	**George Chapman** Scholarship, .	2,309.19	
3,161.30	**Joshua Clapp** " . .	3,337.37	
1,675.80	Beneficiary money returned . . .	1,769.15	
40,000.00	**Th. Tileston** of New York Endowm't	40,000.00	
10,000.00	**Henry P. Kidder** Fund, ...	10,000.00	
1,000.00	**Abby Crocker Richmond** Fund, .	1,000.00	
68,535.36	New Endowment, ...	69,667.02	
17,000.00	**Oliver Ames** Fund, ...	17,000.00	
800.00	**Daniel Austin** Fund, ...	800.00	
11,206.72	**Abner W. Buttrick** Fund, . . .	11,530.95	
			364,877.49

LAWRENCE SCIENTIFIC SCHOOL, AND MUSEUM OF COMPARATIVE ZOÖLOGY FUNDS.

38,807.17	Professorship of Engineering, . .	38,807.17	
2,860.50	Professorship of Chemistry, . . .	2,860.50	
61,536,43	**Abbott Lawrence** Fund,. . . .	61,536.43	
50,375.00	**James Lawrence** "	50,375.00	
30,686.85	**John B. Barringer** "	30,686.85	
100,620.00	**Sturgis Hooper** "	100,570.00	
50,000.00	**Gray** Fund for Zoölogical Museum,	50,000.00	
297,933.10	**Agassiz Memorial** Fund, . .	297,933.10	
7,594.01	Teachers' and Pupils' Fund, . .	7,594.01	
117,469.34	Permanent Fund, ...	117,469.34	
7,740.66	**Humboldt** Fund, ...	7,740.66	
			765,573.06
$3,495,451.97	. . . . . . Amounts carried forward, ...		$3,568,246.23

Principal, Sept. 1, 1882.		Principal, Aug. 31, 1883.	
$3,495,451.97	. . . . . Amounts brought forward, ...		$3,568,246.23
	OBSERVATORY FUNDS.		
110,293.88	**Edward B. Phillips** Fund, . . .	110,293.88	
21,000.00	**James Hayward** “ . . .	21,000.00	
22,440.22	**David Sears** “ . . .	23,065.18	
12,845.46	**Josiah Quincy** “ . . .	12,411.37	
2,000.00	**Charlotte Harris** “ . . .	2,000.00	
10,000.00	Anonymous Observatory Fund (at present charged with an Annuity),	10,000.00	
5,481.98	Observatory Subscriptions (balance),	3,072.52	
	Observatory Endowment, ...	17,384.38	
			199,227.33
	OTHER FUNDS FOR SPECIAL PURPOSES.		
413,092.80	**Bussey** Trust (income thereof, ½ to Bussey Institution, ¼ to Law School, and ¼ to Divinity School), . . .	413,092.80	
50,000.00	**Bright** Legacy, ...	50,000.00	
25,930.13	**Robert Troup Paine** Fund, . . .	27,079.85	
805.55	**Bussey** Institution, ...	50.50	
515.00	Dental Subscription Fund, . . .	955.00	
2,882.43	**Bussey** Building Fund, ...	2,882.43	
151,673.32	**James Arnold** “	152,095.73	
9,949.91	**Arnold** Arboretum	12,596.18	
42,000.00	**James Savage** Fund, ...	42,000.00	
15,941.53	**Gray** Fund for Engravings, . . .	16,146.08	
20,560.63	**Gore** Annuity Fund, ...	20,805.88	
7,362.59	**Mary Osgood** Annuity Fund (transferred to Library Funds).		
12,855.53	**Lucy Osgood** Annuity Fund, . .	5,955.79	
51,073.31	**Bemis** Annuity Fund, ...	51.113.31	
2,528.97	**Gospel Church** Fund, ...	2,669.84	
3,171.50	**John Foster** Fund (income to Divinity School, Law School, and Medical School, in turn), ...	3,171.50	
1,117.76	Baring Bros. & Co. (balance due them),	6,121.86	
	School of Veterinary Medicine, . .	340.78	
	Physical Laboratory Building Fund,	28,458.78	
			835,536.31
	FUNDS IN TRUST FOR PURPOSES NOT CONNECTED WITH THE COLLEGE.		
16,050.99	**Daniel Williams** Fund for the conversion of the Indians, ...	16,051.31	
4,836.13	**Sarah Winslow** Fund, for the Minister and Teacher at Tyngsborough, Mass.,	4,834.39	
			20,885.70
$4,511,861.59			$4,623,895.57

Changes in the Funds during the year ending August 31, 1883.

Total amount of Funds, August 31, 1883, as before stated, ...	$4,623,895.57	
Total amount of Funds, September 1, 1882, as before stated, ...	4,511,861.59	
Showing a total increase during the year of . . .		$112,033.98
Which is made up as follows : —		
Gifts forming new Funds or increasing old ones, ...		243,588.54
Transfers forming new Funds or increasing old ones,	26,121.69	
Balances created during the year, and increase of Funds established during the year, ...	29,733.16	
Increase of Stock Account, by excess of income over expenditure, in College, Library, and University accounts, ...	2,713.27	
		58,568.12
		302,156.66
Deduct from this amount for		
Decrease of Funds by amounts transferred to new accounts, ...	26,121.69	
Decrease of specially invested Funds by loss from change of investment, ...	2,812.11	
Other decrease more than increase of Funds and balances, which appear both at the beginning and end of the year, ...	161,188.88	
		190,122.68
		$112,033.98

Net decrease of Funds and balances as above stated,	190,122.68
Less increase, other than gifts for capital account, as above stated, ...	58,568.12
Leaving amount of the net decrease of the Funds and balances, excluding gifts for capital account, as is also shown in the following table, ...	$131,554.56

Statement showing Changes in the Different

Increase of Funds which appear both at the beginning and the end of the year, being the excess of income (including gifts for immediate use) over payments towards the special objects of those Funds.

Peter C. Brooks Fund,	$41.26
James Walker Fellowship,	324.38
Rogers Scholarship,	802.71
Sumner Prize Fund,	94.02
Retiring Allowance Fund,	1,348.00
Hersey Professorship (**Thomas Lee's** gift),	1,034.68
Hollis " (Divinity),	118.42
Daniel H. Peirce Fund,	63.88
Paul Dudley Fund for Lectures,	113.18
John W. P. Abbott Fund,	190.27
Alford Scholarship,	4.34
Bartlett "	36.13
Bassett "	27.17
Bowditch "	922.75
Bright " (balance),	17.50
Browne "	2.79
Class of 1802 Scholarship,	28.03
" **1815** " (**Kirkland**),	29.06
" **1817** "	8.76
" **1841** "	33.32
" **1852** " (**Dana**),	166.99
Crowninshield "	371.13
Derby " (**George & Martha**),	39.58
Greene "	17.19
Hodges "	356.15
Levina Hoar "	94.93
Hollis "	20.87
Matthews " (balance),	204.26
Pennoyer "	17.26
Edward Russell "	44.50
Saltonstall " (**Mary & Leverett**),	215.11
" " (**Dorothy**),	35.54
Slade "	49.16
Sever "	1.90
Sewall "	24.69
Shattuck "	635.26
Story "	3.68
Toppan "	65.56
Walcott "	51.02
Whiting "	481.92
Palfrey Exhibition,	8.81
John Glover Fund,	59.21
Rebecca A. Perkins Fund,	126.33
Amount carried forward,	$8,331.65

Funds during the year ending August 31, 1883.

Decrease of Funds, which appear both at the beginning and the end of the year, being the excess of payments over income received (including gifts for immediate use) for the special objects of those Funds.

Thomas Cotton Fund,	$.07
John Parker Fellowships,	12.12
Harris Fellowship,	287.16
John Thornton Kirkland Fellowship,	68.01
Robert N. Toppan Prizes,	150.00
Henry Flynt's Bequest,	.17
Abbot Scholarship,	7.96
Bigelow "	95.19
Class of 1814 Scholarship,	27.39
" **1835** "	8.29
W. S. Eliot "	1.89
Farrar "	16.58
Morey "	72.00
Gorham Thomas "	19.01
Townsend "	104.94
Exhibitions,	289.31
Quincy Tufts Fund (College),	37.47
Day Fund,	40.24
Munroe Fund,	3.12
Lee Fund for Reading,	15.90
Boylston Prizes for Elocution,	13.37
Bowdoin Prizes for Dissertations,	35.78
Subscription for Library,	281.11
Bowditch Book Fund,	50.92
Bright " "	125.91
Denny " "	436.84
Farrar " "	4.38
Hayward " "	43.19
Homer " "	7.50
Lane " "	380.13
Salisbury " "	112.84
Sever " "	125.72
Shapleigh " "	139.64
Sumner " "	1,032.69
Tucker " "	4.22
Ward " "	972.89
Wales " "	47.79
Walker " "	133.45
Sundry gifts for Books (unexpended balances),	99.03
Law School (balance),	1,674.46
Law School Building Fund,	99,486.47
Boylston Fund for Medical Prizes,	39.01
Medical School Building Fund,	83,748.73
Amount carried forward,	$190,252.89

Statement showing Changes in the Different

Amount brought forward,	$8,331.65	
Hopkins Gift for "Deturs,"	22.15	
Botanic Department Fund,	693.26	
Physical Laboratory Fund,	1,848.46	
Herbarium Fund,	158.17	
Haven Book Fund,	126.35	
Hollis " "	21.13	
Lowell " "	427.98	
Minot " "	995.37	
New Professorship of Law,	2,962.50	
Medical School (balance),	3,562.20	
Warren Fund for Anatomical Museum,	211.84	
Boylston Fund for Medical Books,	127.00	
Medical Library Fund,	142.21	
Divinity School (general fund),	1,322.59	
Winn Professorship of Ecclesiastical History,	500.00	
Jackson Foundation,	84.77	
J. H. Kendall Scholarship,	185.31	
Nancy " "	161.42	
Adams Ayer Fund,	44.00	
Joshua Clapp Scholarship,	176.07	
Divinity School Beneficiary money returned,	93.35	
Abner W. Buttrick Fund,	324.23	
David Sears "	624.96	
Robert Troup Paine "	1,149.72	
James Arnold "	422.41	
Arnold Arboretum "	2,646.27	
Gray Fund for Engravings,	204.55	
Gore Annuity Fund,	245.25	
Lucy Osgood " "	182.08	
Bemis " "	40.00	
Gospel Church "	140.87	
Baring Bros. & Co.,	5,004.10	
Daniel Williams Fund,	.32	
		33,182.54
Credit balances created,		
Physical Laboratory Building Fund,	28,458.78	
School of Veterinary Medicine,	340.78	
		28,799.56
Increase of Funds established during the year.		
President's Fund,	775.18	
Stoughton Scholarship,	91.63	
Class of 1828 "	57.04	
Rodger "	9.75	
		933.60
Funds established by transfer of accounts,		
Lucy Osgood Book Fund,	7,081.82	
Stoughton Scholarship,	2,039.87	
		9,121.69
Amount carried forward,		$72,037.39

Funds during the year ending August 31, 1883. (Continued.)

Amount brought forward,	$190,252.89	
Thomas Cary Scholarships,	57.46	
George Chapman "	10.78	
Sturgis Hooper Fund,	50.00	
Josiah Quincy "	434.09	
Observatory Subscriptions (balance),	2,409.46	
Bussey Institution,	755.05	
Mary Osgood Legacy,	399.95	
Sarah Winslow Fund,	1.74	
		194,371.42
Decrease of Botanic Department Fund by amount transferred to **Lowell** Fund for a Botanic Garden,		17,000.00
Decrease of **Lucy Osgood** Annuity Fund by amount transferred to **Lucy Osgood** Book Fund,		7,081.82
Decrease of " Exhibitions " by amount transferred to **Stoughton** Scholarship,		2,039.87
Decrease of **E. M. Barringer** Fund, net loss from change of special investment,		2,454.90
Decrease of **George B. Dorr** Fund, net loss from change of special investment,		357.21
Amount carried forward,		$223,305.22

Statement showing Changes in the Different

Amount brought forward,	$72,037.39
Increase of **Lowell** Fund for a Botanic Garden by transfer from Botanic Department Fund, ...	17,000.00
Increase of Stock Account, by excess of income over expenditure, in College, Library, and University accounts, ...	2,713.27
	91,750.66
Balance, which is the net decrease of the Funds for the year ending August 31, 1883, apart from gifts for capital account,	131,554.56
Total, ...	$223,305.22

Funds during the year ending August 31, 1883. (Continued.)

Amount brought forward, ...	**$223,305.22**
Total, ...	**$223,305.22**

The following tables are not found, in their present form, in the Treasurer's books. They are intended to exhibit with some detail the resources and the expenditures of each department of the University. The income of every fund held by the University is given in these tables, and also the sum paid out for the specific object of each and every fund, in case that sum be either less or more than the actual income of the fund. If the object to which the income of a fund is to be applied be a general one, — like salaries, for example,— no separate mention is made in these tables of that appropriation. That particular payment is merged with others of the same kind under the general heading. A balanced summary of these tables will be found on page 52.

TABLE NO. I.

THE UNIVERSITY.

RECEIPTS.

Income of the unappropriated fund heretofore called the Stock Account, ...	$4,732.38	
Income of the following funds : —		
Insurance and Guaranty, ...	7,889.29	
Israel Munson, ...	877.28	
Leonard Jarvis, ...	939.77	
Samuel D. Bradford, ...	292.43	
Sever, ...	501.30	
John C. Gray, ...	1,392.50	
George B. Dorr, ...	7,874.86	
Peter C. Brooks, ...	69.18	
Thomas Cotton, ...	8.19	
President's, ...	775.18	
Parker Fellowship, ...	3,187.88	
John Thornton Kirkland Fellowship, . . .	681.99	
Harris Fellowship, ...	605.24	
James Walker Fellowship, ...	574.38	
Rogers Scholarship, ...	1,602.71	
Sumner Prize, ...	94.02	
Retiring Allowance, ...	1,848.00	$33,446.58
For the degrees of A.M., and Ph.D., ...	390.00	
For care of the **Sarah Winslow** Fund, ...	6.77	
Sale of Quinquennial Catalogues, ...	37.00	
From other Departments for proportion of expenses of Bursar's office, ...	356.14	
Balance remaining after dividing the net income among the Funds, ...	40.78	830.69
		$34,277.27

PAYMENTS.

Overseers' Expenses.		
Advertising, ...	$210.90	
Printing President's Annual Report, ...	457.04	
Printing Treasurer's " "	119.96	
Printing other reports, auditing Treasurer's accounts, &c., ...	201.56	
Amount carried forward, ...		$989.46

TABLE I., CONTINUED.

PAYMENTS.

Amount brought forward, ...		$989.46
Office Expenses.		
President's	$131.79	
Treasurer's	316.30	
Bursar's	524.27	
Supt. of Buildings, ...	63.24	
Corporation Rooms (fuel, rent, &c.), ...	1,695.13	
		2,730.73
Salaries.		
President, ...	5,008.26	
Treasurer, ...	4,000.00	
Secretary of the Board of Overseers, ...	100.00	
Bursar, ...	3,000.00	
Bursar's Assistant, ...	800.00	
Secretary at Cambridge, ...	400.00	
For keeping Treasurer's books and copying records and other papers, ...	2,800.00	
Superintendent of Buildings, ...	1,500.00	
		17,608.26
Fellowships.		
John Parker, ...	3,200.00	
Harris, ...	892.40	
John Thornton Kirkland, ...	750.00	
Rogers Scholarship, ...	800.00	
James Walker, ...	250.00	
		5,892.40
Prizes.		
Robert N. Toppan, in Political Science, . .		150.00
Memorial Hall and Sanders Theatre.		
Repairs, fuel, gas, &c., ...		927.00
Sundries.		
Advertising, ...	1,039.28	
Labor, &c. on grounds outside of College Yard,	358.30	
Repairs and improvements on the President's house,	27.92	
Subscription to Mercantile Agency, ...	125.00	
Watering streets, ...	205.00	
Watchmen, ...	436.46	
Rent of Hall in Boston for lectures on Pedagogy,	16.50	
Fire Apparatus, ...	27.77	
Freight, legal services, diplomas, &c., ...	161.43	
Extra pages in Catalogue, ...	208.80	
Posting notices, &c. to prevent right of way, . .	67.00	
Estimated value of old Gymnasium, credited to the **Henry B. Rogers** Scholarship, . . .	3,180.50	
		5,853.96
		$34,151.81

Table No. II.

THE COLLEGE.

RECEIPTS.

From Term Bills.			
Instruction,		$138,337.50	
Rents available for general expenses,		34,152.27	
Diplomas,		512.50	173,002.27
Income of Scholarship Funds.			
Abbot,		142.04	
Alford,		44.34	
Bartlett,		286.13	
Bassett,		302.17	
Bigelow,		654.81	
Bowditch,		5,922.75	
Bright, ½ income of Bright Legacy,		1,392.50	
Browne,		152.79	
Class of 1802,		398.03	
" **1814,**		172.61	
" **1815 (Kirkland),**		279.06	
" **1817,**		208.76	
" **1828,**		57.04	
" **1835,**		146.71	
" **1841,**		208.32	
" **1852 (Dana)** (accumulating),		166.99	
Crowninshield (accumulating),		371.13	
Derby, George and Martha,		289.58	
Wm. Samuel Eliot,		298.11	
Farrar,		333.42	
Greene,		137.19	
Levina Hoar (Town of Lincoln),		294.93	
Hodges (accumulating),		356.15	
Hollis,		270.87	
Matthews (½ of net rents of Hall),		4,904.26	
Morey,		428.00	
Pennoyer. Interest,	$119.76		
Annuity,	277.50	397.26	
Rodger,		9.75	
Edward Russell (accumulating),		44.50	
Saltonstall, Mary and Leverett,		215.11	
Saltonstall, Dorothy (accumulating),		85.54	
Savage,		300.00	
Sever,		176.90	
Sewall,		524.69	
Shattuck,		2,435.26	
Slade,		299.16	
Story,		153.68	
Stoughton,		91.63	
Gorham Thomas,		230.99	
Toppan,		365.56	
Townsend,		1,395.06	
Walcott,		217.68	
Whiting (accumulating),		481.92	25,593.38
Received from the Trustees of the **Thayer** Scholarships,			3,600.00
Amount carried forward,			$202,195.65

TABLE II., CONTINUED.

RECEIPTS.

Amount brought forward,			$202,195.65
Other Beneficiary Funds, income of.			
"Exhibitions," Interest,	$549.15		
Returned by beneficiaries,	85.00	$634.15	
Palfrey "Exhibition,"		98.81	
Samuel Ward. From special investment,		50.00	
John Glover (accumulating),		59.21	
Rebecca A. Perkins "		126.33	
Quincy Tufts,		610.53	
Moses Day,		294.76	
Munroe,		569.03	2,442.82
Prize Funds, income of.			
Thomas Lee Prizes for Reading,		874.10	
Ward Nicholas Boylston Prizes for Elocution,		241.63	
James Bowdoin Prizes for Dissertations,		664.22	
Edward Hopkins Gift for "Deturs,"		289.25	2,069.20
Funds for Instruction.			
Income of the **Alford** Professorship,		1,545.62	
Boylston "		1,578.37	
Eliot "		1,204.23	
J. Phillips's addition to Eliot Prof.,		500.00	
Erving Professorship,		194.95	
Fisher "		2,004.70	
Hersey "		671.61	
Hollis " (Mathematics),		208.71	
McLean "		2,398.61	
Perkins "		1,169.70	
Plummer "		1,393.61	
Pope "		2,924.25	
Rumford "		2,975.68	
Smith "		1,288.90	
Fund for Permanent Tutors,		904.57	
Thos. Lee Fund for the Hersey Prof.		1,034.68	
Class Subscription,		6,962.50	
Henry Flynt,		18.27	
Hollis Professor of Divinity,		1,918.42	
Paul Dudley Fund (accumulating),		113.18	
Gifts to increase salaries,		800.00	31,810.56
Botanic Garden.			
Income of Fund. Interest,	$2,184.33		
From special investment,	1,012.95	3,197.28	
" " the **Lowell** Fund,		2,274.79	
Estimated value of use of house by Prof. Gray,		1,000.00	6,472.07
Herbarium. Income of Fund,		1,008.17	
Sale of paper, &c.,		34.00	
Gift for Curator's salary,		1,000.00	2,042.17
Amount carried forward,			$247,032.47

TABLE II., CONTINUED.

RECEIPTS.

Amount brought forward,	$247,032.47	
Income of **Jonathan Phillips's** unrestricted Fund,	$1,754.55	
" " **John A. Blanchard's** " "	58.49	
" " **Daniel H. Pierce** Fund, ...	638.35	
" " **J. W. P. Abbot** " (accumulating),	190.27	
" " Fund for Physical Laboratory, ...	1,848.46	
		4,490.12
Sundries.		
For the Degree of Bachelor of Arts out of course, and examination fees, ...	744.00	
Sales of grass and old material, ...	160.19	
Sale of old examination papers, ...	6.536	
For Printing by College Press for other departm'ts,	997.50	
For use of rooms by College officers, ...	745.00	
Sale of tickets to Commencement Dinner of 1883,	996.00	
For use of lockers at Gymnasium, ...	1,753.00	
Fees for use of Gymnasium, ...	40.00	
For use of Gymnasium by other Departments, .	858.66	
From **Louis A. Shaw**, for books for French Dpt.	109.61	
		6,469.32
Total receipts, ...		$257,991.91

PAYMENTS.

Paid the incumbents of the following Scholarships.	
Abbot, ...	$150.00
Alford, ...	40.00
Bartlett, ...	250.00
Basset, ...	275.00
Bigelow, ...	750.00
Bowditch, ...	5,000.00
Bright, ...	1,375.00
Browne, ...	150.00
Class of 1802, ...	250.00
" **1814**, ...	200.00
" **1815 (Kirkland)**, ...	250.00
" **1817**, ...	200.00
" **1835**, ...	150.00
" **1841**, ...	175.00
Derby, George and **Martha**, ...	250.00
Wm. Samuel Eliot, ...	300.00
Farrar, ...	350.00
Greene, ...	120.00
Levina Hoar, ...	200.00
Hollis,.	250.00
Matthews, ...	4,700.00
Morey, ...	500.00
Amount carried forward,	$15,885.00

TABLE II., CONTINUED.

PAYMENTS.

Amount brought forward,	$15,885.00	
Pennoyer,	380.00	
Savage,	300.00	
Sever,	175.00	
Sewall,	500.00	
Shattuck,	1,800.00	
Slade,	250.00	
Story,	150.00	
Thayer,	3,600.00	
Gorham Thomas,	250.00	
Toppan,	300.00	
Townsend,	1,500.00	
Walcott,	166.66	
		25,256.66
Paid other Beneficiaries.		
Exhibitions,	923.46	
Palfrey Exhibition,	90.00	
Samuel Ward Income,	50.00	
Quincy Tufts " (part of),	648.00	
Day Fund " " "	335.00	
Munroe Fund " " "	572.15	
		2,618.61
Prizes. **Lee** Prizes for Reading,	290.00	
Boylston Prizes for Elocution,	255.00	
Bowdoin Prizes for Dissertations	700.00	
"Deturs" from **Hopkins** Fund	267.10	
		1,512.10
Salaries for instruction,		137,624.19
Repairs and improvements on College Edifices not valued on Treasurer's books,		6,452.57
Insurance on College Edifices, etc. not valued on Treasurer's books,		13.34
Botanic Garden, for labor, repairs, and materials,		5,778.81
Herbarium, " " "		1,884.00
Gymnasium, Locker money, paid Director,	1,081.00	
Salaries and wages,	2,666.00	
Janitors and cleaning,	943.79	
Gas, water, and sundries,	790.34	
Fuel,	626.13	
Apparatus and fittings,	2,848.82	
		8,956.08
General Expenses.		
Appropriations for collections and laboratories.		
Physical Apparatus (Prof. Lovering),	$600.00	
Mineral and Chemical (Prof. Cooke),	800.00	
Rumford (Prof. Gibbs),	300.00	
Botanical (Prof. Farlow),	350.00	
Biological (Prof. Farlow),	35.00	
Geological (Prof. Shaler),	100.00	
Amounts carried forward,	$2,185.00	$190,096.36

Table II., continued.

PAYMENTS.

Amounts brought forward,	$2,185.00		$190,096.36
Zoölogical (Asst. Profs. Faxon and Mark),	70.00		
Fine Arts (Prof. Norton), ...	200.00		
Physical (Prof. Trowbridge), ...	300.00		
Drawing (Instructor Moore), ...	100.00		
		$2,855.00	
Appleton Chapel.			
Preaching and morning services, . . .	1,835.00		
Organist and Choir-master, ...	800.00		
Choir, ...	800.00		
Books, hymnals, and music, ...	116.48		
Repairing organ, ...	603.28		
Blowing organ, ...	73.75		
		4,228.51	
Admission examinations, ...		867.54	
Advertising, ...		22.38	
Books and binding, ...		157.89	
Cleaning and care of College buildings not valued on Treasurer's books, ...		8,242.52	
College Yard expenses, labor and material, &c., .		2,040.85	
Commencement Dinner 1883, ...		998.34	
Dean's and Registrar's Office, clerk, stationery, postage, copying, &c., ...		1,790.11	
Fuel, ...		3,872.12	
Furniture, ...		159.72	
Freight, diplomas, and sundries, ...		267.39	
Gas, ...		1,375.71	
Music, Class-Day, 1883, ...		125.00	
" Commencement, 1883, ...		185.00	
Pews hired in Cambridge churches, ...		1,024.50	
Printing office, expenses, ...		3,322.55	
Printing, ...		4.50	
Services of examiners and proctors, ...		2,880.55	
" " undergraduates, ...		701.98	
Watchman, ...		1,048.50	
Water rates, ...		340.45	
			$36,511.11
Total payments, ...			$226,607.47

Table No. III.

THE LIBRARY.

RECEIPTS.

Income of the following Funds for the purchase of books.		
Subscription for Library, ...		$628.69
Nathaniel I. Bowditch, ...		119.20
Bright, ½ income of the **Bright** Legacy,	$1,392.50	
Interest on balance, ...	145.93	1,538.43
Amount carried forward,		$2,286.32

Amount brought forward,		$2,286.32	
Denny,		317.55	
Eliza Farrar,		295.38	
Horace A. Haven,		195.84	
George Hayward,		320.55	
Thomas Hollis,		136.97	
Sidney Homer,		115.86	
Frederick A. Lane,		322.95	
Lowell,		1,140.18	
Charles Minot. Interest,	$68.62		
From special investment,	4,200.00	4,268.62	
Stephen Salisbury,		289.03	
Sever,		1,143.97	
Samuel Shapleigh,		248.14	
Charles Sumner,		2,133.87	
Ichabod Tucker. From special investment,		200.00	
Thomas W. Ward,		335.04	
George W. Wales. Gift,	$200.00		
Interest on unexpended balance,	9.97	209.97	
James Walker,		918.49	
			14,878.73
Gift from Dante Society,			100.00
James Savage Fund for general expenses (½ of income),		1,019.70	
Daniel Austin " " " "		311.92	
			1,331.62
William B. Weeden, gift to aid in publ. Lib'y Bulletins,		100.00	
Henry Lee, " " " " " " "		50.00	
Alexander Agassiz, " " " " " " "		50.00	
Charles P. Curtis, " " " " " " "		200.00	
Charles S. Sargent, " " " " " " "		50.00	
			450.00
Fees for use of Library,		165.00	
Sales of Bulletins and Calendars,		75.00	
Fines,		1.51	
			241.51
			$17,001.86

PAYMENTS.

For Books from

Subscription Fund,		$909.80
Bowditch	"	170.12
Bright	"	1,664.34
Denny	"	754.39
Farrar	"	299.76
Gray	"	37.47
Haven	"	69.49
Hayward	"	363.74
Hollis	"	115.84
Homer	"	123.36
Lane	"	703.08
Lowell	"	712.20
Amount carried forward,		$5,923.59

TABLE III., CONTINUED.

PAYMENTS.

Amount brought forward, ...	$5,923.59	
Minot Fund, ...	3,273.25	
Salisbury "	401.87	
Sever "	1,269.69	
Shapleigh "	387.78	
Sumner "	3,166.56	
Tucker "	204.22	
Ward "	1,307.93	
Wales "	257.76	
Walker "	1,056.94	
Dante Society money, ...	132.84	
Duplicate "	17.57	
Balance of old anonymous gift, ...	12.66	17,412.66
Salaries and wages, ...	14,697.72	
Binding, ...	1,285.30	
Stationery and postage, ...	589.40	
Fuel, ...	892.29	
Repairs and improvements, ...	176.11	
Freight, water, and sundries, ...	216.38	
Janitors and cleaning, ...	479.77	
Furniture, ...	295.00	
Insurance on steam boiler, ...	15.00	
Bulletins, and other printing, ...	1,364.96	20,011.93
		$37,424.59

TABLE NO. IV.

DIVINITY SCHOOL.

RECEIPTS.

Income of the following Funds applicable to Salaries.

General Fund, ...	$1,308.17
Benjamin Bussey Professorship, ...	2,093.43
Parkman Professorship, ...	892.09
John Hancock "	334.65
Winn Professorship of Ecclesiastical History, .	2,470.07
Samuel Dexter, ...	1,129.60
Henry Lienow, ...	511.60
Mary P. Townsend, ...	292.43
Winthrop Ward, ...	116.97
Samuel Hoar, ...	58.49
Abraham W. Fuller, ...	58.49
Caroline Merriam, ...	58.49
Joseph Baker, ...	438.64
Thomas Tileston of New York Endowment, .	2,228.00
Amount carried forward, ...	$11,991.12

TABLE IV., CONTINUED.

RECEIPTS.

Amount brought forward, . .	$11,991.12	
Oliver Ames, ...	946.90	
Henry P. Kidder, ...	557.00	
Abby Crocker Richmond, ...	55.70	
New Subscription, ...	3,832.44	17,383.16
Income of Scholarship Funds.		
Thomas Cary, ...	292.54	
George Chapman, ...	129.22	
Joshua Clapp, ...	176.07	
Jackson Foundation, ...	724.77	
J. Henry Kendall, ...	185.31	
Nancy Kendall, ...	161.42	1,669.33
Income of other Funds.		
Joshua Clapp, ...	121.31	
William Pomeroy, ...	58.49	
Hannah C. Andrews, ...	29.24	
Lewis Gould, ...	50.74	
Daniel Austin, ...	44.56	
Abner W. Buttrick, ...	624.23	
Adams Ayer, ...	44.00	
John Foster, income for Divinity students every third year, ...	176.68	
Interest on Beneficiary money returned, ...	93.35	1,242.60
Term Bills.		
For Instruction, ...	1,350.01	
For Rents, ...	1,572.72	2,922.73
Sale of books, &c., ...		18.50
Benjamin Bussey Trust. One-fourth of net income for use of this School, ...		2,611.74
		$25,848.06

PAYMENTS.

For Salaries for Instruction, ...	$18,411.68	
Services of students, ...	200.00	
Labor, repairs, and improvements, ...	1,117.37	
Cleaning and care of rooms, ...	578.50	
Books and binding, ...	117.00	
Printing, ...	48.25	
Fuel, ...	319.58	
Gas, ...	119.68	
Water rates, ...	30.00	
Stationery, postage, diplomas, and sundries, . . .	17.95	
Collation, ...	70.00	
Furniture, ...	326.31	
Proportion of expenses of Bursar's office, ...	52.54	
" " " " Gymnasium, ...	126.69	
Amount carried forward, ...		$21,535.55

TABLE IV., CONTINUED.

PAYMENTS.

Amount brought forward,		$21,535.55
Paid the incumbents of the following Scholarships.		
Jackson Foundation,	$640.00	
Cary,	350.00	
Chapman,	140.00	1,130.00
Paid beneficiaries from the following Funds.		
Buttrick,	300.00	
Pomeroy,	59.01	359.01
		$23,024.56

TABLE NO. V.

LAW SCHOOL.

RECEIPTS.

Income of the following funds.		
Law School Balance,	$469.33	
Nathan Dane,	877.28	
Benjamin Bussey Professorship,	1,335.69	
Isaac Royall,	464.59	
New Professorship,	4,500.00	
Law School Book Fund,	1,534.20	
" " Building "	2,746.78	
Benjamin Bussey Trust (½ of net income for use of this School),	2,611.74	14,539.61
Term Bills.		
For instruction,		19,375.00
Sale of books,		265.42
		$34,180.03

PAYMENTS.

For Salaries for Instruction,	$20,012.50	
Librarian and Assistants,	2,200.00	
Janitor and coat-room boy,	750.37	
Books and binding,	2,926.50	
Fuel,	510.59	
Gas,	295.42	
Printing	144.00	
Scholarships,	1,200.00	
Labor, repairs, and improvements,	190.25	
Stationery and postage,	114.23	
Freight, diplomas, and sundries,	64.68	
Water rates,	57.24	
Furniture,	8.06	
Account of new building,	102,233.25	
Services of examiners and proctors,	64.25	
Proportion of expenses of Bursar's office,	254.95	
" " " " Gymnasium,	614.67	
Insurance,	737.50	$132,378.46

TABLE No. VI.

MEDICAL SCHOOL.

RECEIPTS.

Income of the following Funds.			
Medical School, balance,		$3,749.33	
Jackson Medical,		1,069.05	
Warren, for Anatomical Museum,		670.18	
Ward Nicholas Boylston, for Medical Prizes,		210.99	
Ward Nicholas Boylston, for Medical Books,		127.00	
George C. Shattuck,		954.09	
Hersey Professorship, two-fifths income of the fund,		454.48	
Medical Library Fund,		146.21	
Medical School Building Fund,		2,084.09	
Quincy Tufts,		111.40	
Edward M. Barringer. Interest,	$492.56		
From special investment,	25.00	517.56	
			10,094.38
From students for instruction,		44,997.57	
" " for graduation fees,		2,190.00	
" " in Chemical Laboratory, breakage and chemicals,		988.72	
" " in Practical Anatomy, for material,		806.80	
			48,983.09
Subscriptions to the Building Fund,			4,100.00
Insurance for fire in new building,			18,569.76
			$81,747.23

PAYMENTS.

Boylston Medical Prizes. Prizes,	$200.00		
Advertising,	50.00	250.00	
Warren Anatomical Museum.			
Expenses, and additions to collection,		458.34	
Chemical Laboratory, apparatus, chemicals, and wages,		1,705.60	
Physiological Laboratory, expenses and wages,		1,050.00	
Practical Anatomy and Surgery Expenses,		3,905.15	
Obstetrics Expenses,		316.80	
Histology "		51.58	
Materia Medica "		113.42	
Salaries for instruction,		36,554.48	
Repairs and improvements,		168.79	
Scholarships,		1,000.00	
For account of new building,		108,502.58	
			154,076.74
General Expenses.			
Advertising and catalogues,		$1,962.19	
Alcohol,		39.39	
Books from Library Fund,		4.00	
Cleaning,		245.64	
Clerk,		700.00	
Diplomas,		61.80	
Amounts carried forward,		$3,013.02	$154,076.74

TABLE VI., CONTINUED.

PAYMENTS.

Amounts brought forward,	$3,013.02	$154,076.74
Doorkeeper,	60.00	
Faculty meetings,	32.48	
Fuel,	585.17	
Gas,	532.72	
Insurance,	900.00	
Janitor,	1,200.00	
Librarian,	20.00	
Moving furniture, &c.,	44.00	
Printing,	95.45	
Rent of rooms (in part) for Pathological specimens,	200.00	
Rent and heating of rooms for Chemical Laboratory,	558.34	
Services of Examiners,	5.00	
Stationery, postage, and sundries,	77.38	
Water rates,	91.42	7,414.98
		$161,491.72

TABLE No. VII.

DENTAL SCHOOL.

RECEIPTS.

Income of Subscription Fund,	$38.88	
From Students,	4,150.00	
Infirmary,	1,108.15	
Laboratory,	187.75	
Rent of a part of the School building,	290.00	
		$5,774.78

PAYMENTS.

Advertising and catalogues,	$155.97	
Care of operating room at hospital, and cleaning,	81.00	
Drugs, chemicals, and sundries,	65.13	
Diplomas,	13.70	
Fuel,	145.20	
Gas,	18.18	
Gold foil and metals,	522.40	
Instruments and apparatus,	297.31	
Interest on debt,	869.30	
Printing,	27.75	
Repairs to building,	130.59	
Repairing furniture,	58.79	
Salaries for instruction,	2,350.00	
Stationery and postage,	81.67	
Taxes,	117.78	
Water rates,	11.00	
		$4,945.77

TABLE No. VIII.

LAWRENCE SCIENTIFIC SCHOOL, AND MUSEUM OF COMPARATIVE ZOÖLOGY.

RECEIPTS.

Income of the following Funds.			
Professorship of Engineering,		$2,161.55	
Professorship of Chemistry,		159.36	
Abbott Lawrence,		3,427.56	
James Lawrence,		2,805.89	
John B. Barringer. Interest,	$1,586.73		
From special investment,	200.00	1,786.73	
Gray Fund for Zoölogical Museum,		2,785.00	
Sturgis Hooper,		5,570.00	
Agassiz Memorial. Interest,	$15,201.98		
From special investment,	1,496.73	16,698.71	
Teachers and Pupils,		422.99	
Humboldt,		431.17	
Permanent Fund for Museum of Zoölogy,		6,543.02	
			42,791.98
Term Bills, for Instruction,			4,080.00
			$46,871.98

PAYMENTS.

Paid on the order of the Faculty of the Museum of Comparative Zoölogy, from the following Funds.		
Gray,	$2,785.00	
Agassiz Memorial,	12,472.48	
Teachers and Pupils,	422.99	
Humboldt,	431.17	
Permanent,	6,543.02	
		22,654.66
Salaries for instruction,	16,344.23	
Expenses in Geology,	620.00	
Stationery and postage,	11.10	
Proctorial services,	13.00	
Books, Engineering Department,	45.35	
Printing,	26.50	
Fuel,	365.31	
Gas, freight, and sundries,	25.17	
Janitor and cleaning,	537.70	
Labor and repairs,	183.99	
Expenses Chemical Laboratory (part of),	286.73	
Scholarships,	450.00	
Interest on advances,	282.44	
Water rates,	31.65	
Proportion of expenses of Bursar's office,	48.65	
" " " " Gymnasium,	117.30	
		19,389.12
		$42,043.78

Table No. IX.

OBSERVATORY.

RECEIPTS.

Income of the following Funds.		
Observatory, balance,	$305.35	
Edward B. Phillips,	6,143.38	
James Hayward,	1,169.70	
David Sears,	1,249.91	
Josiah Quincy,	715.47	
James Savage (½ of net income),	1,019.70	
Charlotte Harris,	111.40	
New Endowment,	179.74	10,894.65
Fee for instruction,		37.50
Subscriptions, for immediate use,		3,030.00
From sale of time signals,	2,862.50	
" " " Observatory Annals,	78.75	
" " " grass,	25.00	2,966.25
		$16,928.40

PAYMENTS.

Salaries and wages,	$13,756.16	
Cleaning and care of Observatory,	243.02	
Gas,	62.16	
Instruments and apparatus, including repairs on same,	1,757.41	
Repairs and improvements on buildings and grounds,	784.92	
Stationery and postage,	389.23	
Fuel,	92.32	
Books and binding,	250.54	
Water rates,	50.00	
Printing,	1,453.40	
Freight, chemicals, and sundries,	230.97	
Furniture,	76.86	$19,146.99

Table No. X.

BUSSEY INSTITUTION.

RECEIPTS.

From **Bussey** Trust (½ net income),	$5,223.48	
From **Bussey** Building Fund,	160.53	
Fees for Instruction,	870.00	
Sale of coal to Arboretum,	85.91	
Sale of grass,	435.56	
From **Arnold** Arboretum for rent of greenhouses,	50.00	$6,825.48

PAYMENTS.

For Salaries,	$5,107.88	
Books,	25.24	
Stationery and postage, cleaning, gas, &c.,	34.18	
Fuel for school building,	30.87	
Wages,	708.45	
Horticultural Department, expenses,	728.07	
Repairs and improvements,	917.42	
Grain,	18.42	
Insurance,	10.00	$7,580.53

Table X., continued.

Bussey Building Fund.

Receipts.

Income of unexpended balance of Fund, ...	$160.53

Payments.

Income carried to Bussey Institution, ...	$160.53

James Arnold Fund.

Receipts.

Income of Fund, ...	$8,448.19

Payments.

19/20 of income carried to Arnold Arboretum, ...	$8,025.78

Arnold Arboretum.

Receipts.

Income of unexpended balance of Fund, ...	$554.22	
From **James Arnold** Fund, ...	8,025.78	
Sale of wood, grass, &c., ...	658.60	
		$9,238.60

Payments.

Salary of Director and Assistant, ...	$3,005.00	
Expenses of Arboretum, ...	3,587.33	
		$6,592.33

School of Veterinary Medicine.

Receipts.

Gift of **Henry L. Higginson,**	$500.00	
Subscriptions to Veterinary Hospital, ...	450.00	
		$950.00

Payments.

Salaries for instruction, ...	$208.33	
Advertising, ...	242.18	
Printing and other expenses, ...	158.71	
		$609.22

Table No XI.

MISCELLANEOUS FUNDS.

Bussey Trust.

Receipts.

Net income from Real Estate, ...	$17,109.30

Payments.

Annuities, ...	$6,662.34	
One-half of the remaining income to Bussey Institution,	5,223.48	
One-quarter " " " Divinity School, .	2,611.74	
" " " " " Law School, . . .	2,611.74	
		$17,109.30

Table XI., continued.

Gray Fund for Engravings.

Receipts.

Interest on Fund,	$878.33	
From sale of catalogues,	148.50	
		$1,026.83

Payments.

To the Treasurer of the Museum of Fine Arts,		$822.28

Annuity Funds.

Receipts.

Gore, income,	$1,145.25	
Mary Osgood, income,	389.96	
Lucy Osgood, income,	716.08	
Anonymous Observatory, income,	720.00	
Bemis, income,	2,785.00	
		$5,756.29

Payments.

Gore, annuities,	$900.00	
Mary Osgood, annuity,	789.91	
Lucy Osgood, annuities,	534.00	
Anonymous Observatory, annuity,	720.00	
Bemis, annuity,	2,745.00	
		$5,688.91

Daniel Williams Fund.

Receipts.

Interest on Fund,		$894.04

Payments.

Treasurer of Herring Pond Indians,	$297.90	
" " Mashpee Indians,	595.82	
		$893.72

Sarah Winslow Fund.

Receipts.

Interest on Fund,		$269.37

Payments.

Minister at Tyngsborough, Mass.,	$132.17	
Teacher at " "	132.17	
Commission on income credited to University,	6.77	
		$271.11

James Savage Fund.

Receipts.

Interest on Fund,		$2,339.40

Payments.

Scholarship,	$300.00	
One-half the remaining income to Library,	1,019.70	
" " " " Observatory,	1,019.70	
		$2,339.40

TABLE XI, CONTINUED.

Bright Legacy.

Receipts.

Interest on Fund, ...		$2,785.00

Payments.

One-half income to **Bright** Book Fund, ...	$1,392.50	
One-half income to Scholarship Fund, ...	1,392.50	
		$2,785.00

Sundry Accounts.

Receipts.

From **Thomas Jefferson Coolidge** for the Jefferson Physical Laboratory, ...	$50,000.00	
Interest on the same, ...	178.78	
	50,178.78	
From Baring Bros. & Co., in account, ...	5,004.10	
		$55,182.88

Payments.

Jefferson Physical Laboratory, spent on building, .	$21,720.00	
Annuity for Class of 1802, ...	120.00	
E. M. Barringer Fund, net loss from change of special investment, ...	2,454.90	
George B. Dorr Fund, net loss from change of special investment, ...	357.21	
Advances repaid, to		
Agassiz Memorial Fund, ...	4,226.23	
Dental School, ...	829.01	
Lawrence Scientific School, ...	651.97	
		$30,359.32

Gospel Church Fund (accumulating).	Interest on Fund, . . .	$140.87
Robert Troup Paine Fund "	From special investment,	1,149.72

GENERAL SUMMARY OF THE TABLES.

			Receipts.	Payments.
Table	I.	University, ...	$34,277.27	$34,151.81
Table	II.	College, ...	257,991.91	226,607.47
Table	III.	Library, ...	17,001.86	37,424.59
Table	IV.	Divinity School, ...	25,848.06	23,024.56
Table	V.	Law School, ...	34,180.03	132,378.46
Table	VI.	Medical School, ...	81,747.23	161,491.72
Table	VII.	Dental School, ...	5,774.78	4,945.77
Table	VIII.	Lawrence Scientific School, . . .	46,871.98	42,043.78
Table	IX.	Observatory, ...	16,928.40	19,146.99
Table	X.	Bussey Institution, ...	6,825.48	7,580.53
		Bussey Building Fund, ...	160.53	160.53
		James Arnold Fund, ...	8,448.19	8,025.78
		Arnold Arboretum, ...	9,238.60	6,592.83
		School of Veterinary Medicine, . .	950.00	609.22
Table	XI.	Bussey Trust, ...	17,109.30	17,109.30
		Gray Fund for Engravings, ...	1,026.83	822.28
		Annuity Funds, ...	5,756.29	5,688.91
		Daniel Williams Fund, ...	894.04	893.72
		Sarah Winslow Fund, ...	269.37	271.11
		James Savage Fund, ...	2,339.40	2,339.40
		Bright Legacy, ...	2,785.00	2,785.00
		Sundry Accounts, ...	55,182.88	30,359.32
		Gospel Church Fund, ...	140.87	
		Robert Troup Paine Fund, ...	1,149.72	
			$632,898.02	$764,452.58
				632,898.02
			Balance	$131,554.56

Which is the net decrease of the Funds and balances, excluding gifts for capital account, as also shown on page 27.

Certificate of the Joint Committee of the Corporation and Overseers of Harvard College, for examining the Books and Accounts of the Treasurer entered in the Journal kept by him.

We, the undersigned, a joint committee of the Corporation and Overseers of Harvard College to examine the books and accounts of the Treasurer for the year ending August 31, 1883, have examined and audited the Cash book from pages 160 to 201, inclusive, and have seen that all the bonds, notes, mortgages, certificates of stock, and other evidences of property, which were received by him and on hand at the beginning of said year, are now in his possession, or are fully accounted for by entries made therein. We have also noticed all payments, both of principal and interest, indorsed on any of said bonds or notes, and have seen that the amounts so indorsed have been duly credited to the College.

We have carefully examined all notes, bonds, mortgages, and other securities invested during the said year, and are of opinion that all such investments have been judiciously made and are amply secured.

We have in like manner satisfied ourselves that all the entries for moneys expended by the Treasurer, or charged in his books to the College, are well vouched; such of them as are not supported by counter entries being proved by regular vouchers and receipts.

The Committee have also seen that all the entries for said year are duly transferred to the Ledger, and that the accounts there are rightly cast, and the balances carried forward correctly to new accounts.

(Signed,)

MARTIN BRIMMER,
JOHN QUINCY ADAMS,
Committee on the part of the Corporation.

HENRY P. KIDDER,
CHARLES HENRY PARKER,
ISRAEL M. SPELMAN,
Committee on the part of the Board of Overseers.

Boston, Dec. 19, 1883.